

Appendix F. Option 4 Hydrologic/Hydrodynamic Model Results

The following appendix presents hydrologic/hydrodynamic model results in the following tables and figures:

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Figure F-1c. Sacramento River at Rio Vista Below Normal Year Average Flows

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Figure F-2c. San Joaquin River at Vernalis Below Normal Year Average Flows

Figure F-2d. San Joaquin River at Vernalis Dry Year Average Flows

Figure F-2e. San Joaquin River at Vernalis Critical Year Average Flows

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F. Option 3 Hydrologic/Hydrodynamic Model Results

1

2 Table F-1. Summary Output for the Implementation of Conservation Strategy: Option 3

	Base		Option 3A				Option 3B			
	Annual Average ² (1)	Dry period ³ (2)	Annual Average ² (3)	Dry period ³ (4)	Change (3)-(1)	Change (4)-(2)	Annual Average ² (5)	Dry period ³ (6)	Change (5)-(1)	Change (6)-(2)
Delta flows¹										
Sacramento River @ Hood	16,229	8,269	16,188	8,302	-41	33	16,260	7,959	31	-310
San Joaquin River @ Vernalis	3,027	1,362	3,033	1,371	6	9	3,029	1,336	2	-26
Sacramento River @ Rio Vista	13,812	5,164	10,678	3,865	-3,134	-1,299	10,950	3,388	-2,861	-1,777
Delta Outflow	14,991	5,154	14,579	4,753	-412	-401	15,043	4,227	52	-927
SWP/CVP Exports	5,902	3,572	6,309	4,007	407	435	5,878	4,159	-24	586
QWEST (cfs)	1,620	-12	5,397	1,241	3,778	1,253	5,665	1,166	4,045	1,178
Old and Middle River (cfs)	-5,842	-4,635	-865	-2,113	4,977	2,522	-718	-2,101	5,124	2,534
Water quality⁴	Annual Average ⁵ (1)	Dry period ³ (2)	Annual Average ⁵ (3)	Dry period ³ (4)	Change (3)-(1)	Change (4)-(2)	Annual Average ⁵ (5)	Dry period ³ (6)	Change (5)-(1)	Change (6)-(2)
X2 (km)	76	82	77	83	1	1	76	84	0	2
EC Exports ⁶	488		283		-205		269		-219	
EC at Emmaton	1,128		1,573		445		1,628		500	
EC at Jersey Point	1,074		1,297		224		1,243		170	
EC at Collinsville	3,816		4,555		740		4,766		951	
EC at Old River, Hwy 4	488		625		137		646		159	
Particle Transport and Fate⁷	Average ⁸ (1)		Average ⁸ (2)		Change (2)-(1)		Average ⁸ (3)		Change (3)-(1)	
Insertion on Old River @ Quimby Island	57		1		-56		1		-56	
Insertion on Middle River @ Mildred Island	59		26		-33		67		8	
Insertion on San Joaquin River near Big Break	9		0		-9		1		-9	
Insertion on Sacramento River near Cache Slough	13		1		-13		1		-12	
Insertion on San Joaquin River near Head of Old River	47		5		-42		8		-39	

3

1 **Table F-1. Summary Output for the Implementation of Conservation Strategy: Option 3**

2 NOTES:

3 1. Units in TAF unless mentioned otherwise

4 2. Annual average, 1921-2003

5 3. Dry period, 1928-1934

6 4. Units in EC, $\mu\text{MHOS}/\text{cm}$ unless mentioned otherwise

7 5. For EC parameter values represent 16-year monthly Period Averaged; for X2 values represent annual average, 1921-2003

8 6. EC is blended between EC at Banks and EC at Tracy

9 7. Percentage of particles entering SWP and CVP pumping stations

10 8. Average of 1977, 1981 and 1990 releases of % cumulative particles ended up in exports at the end of 40 days

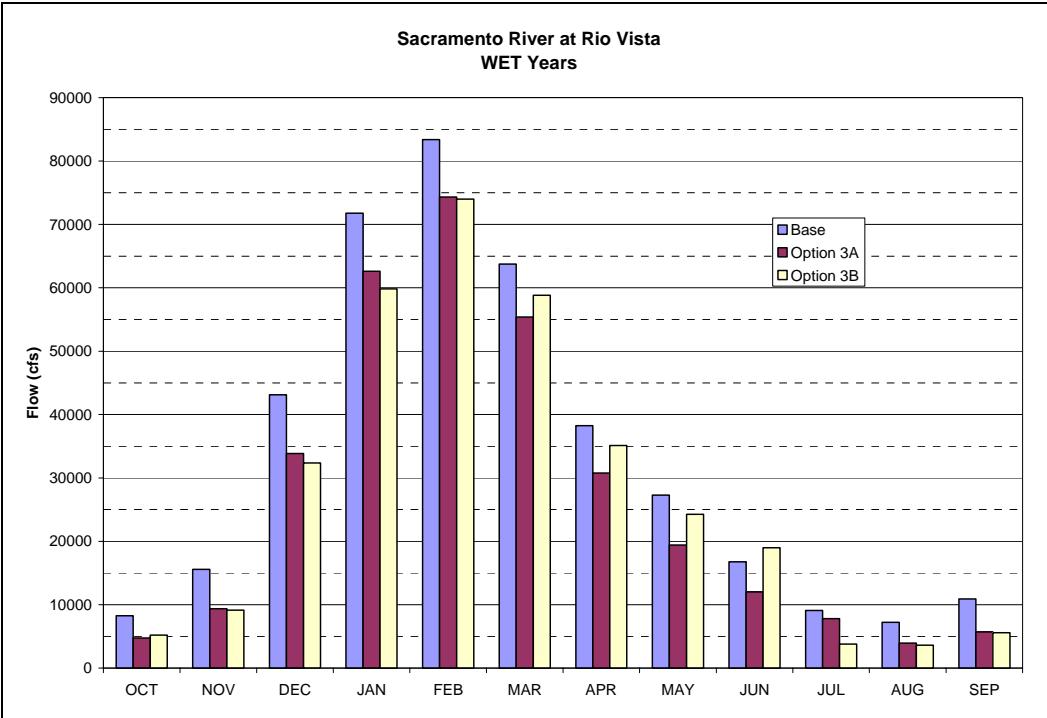


Figure F-1a. Sacramento River at Rio Vista Wet Year Average Flows

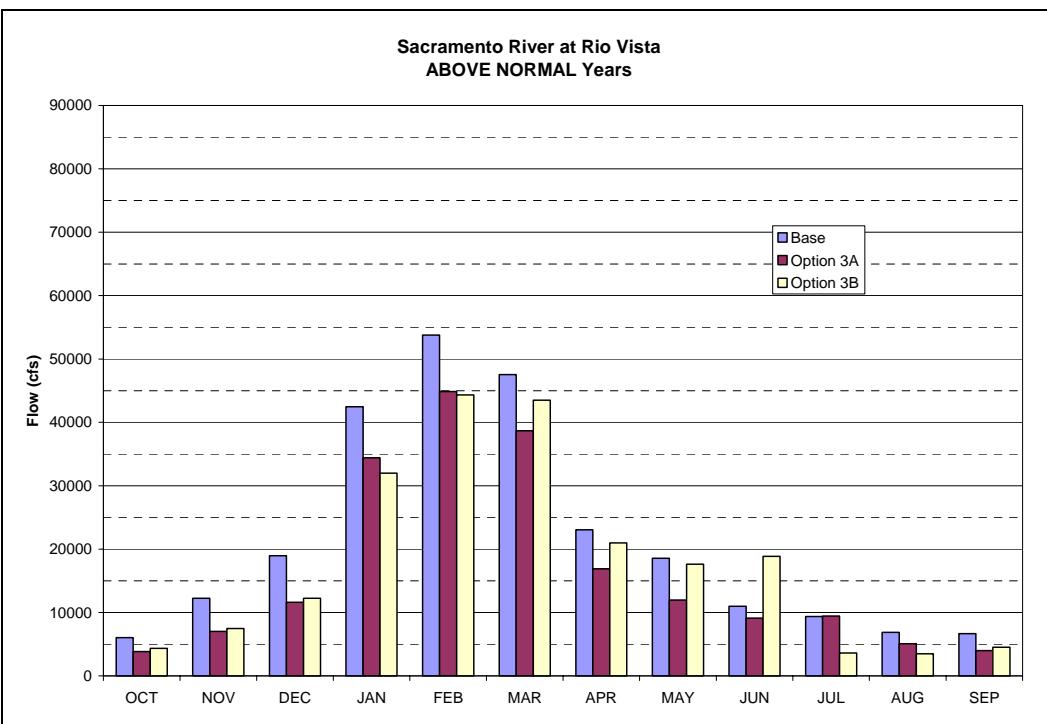


Figure F-1b. Sacramento River at Rio Vista Above Normal Year Average Flows

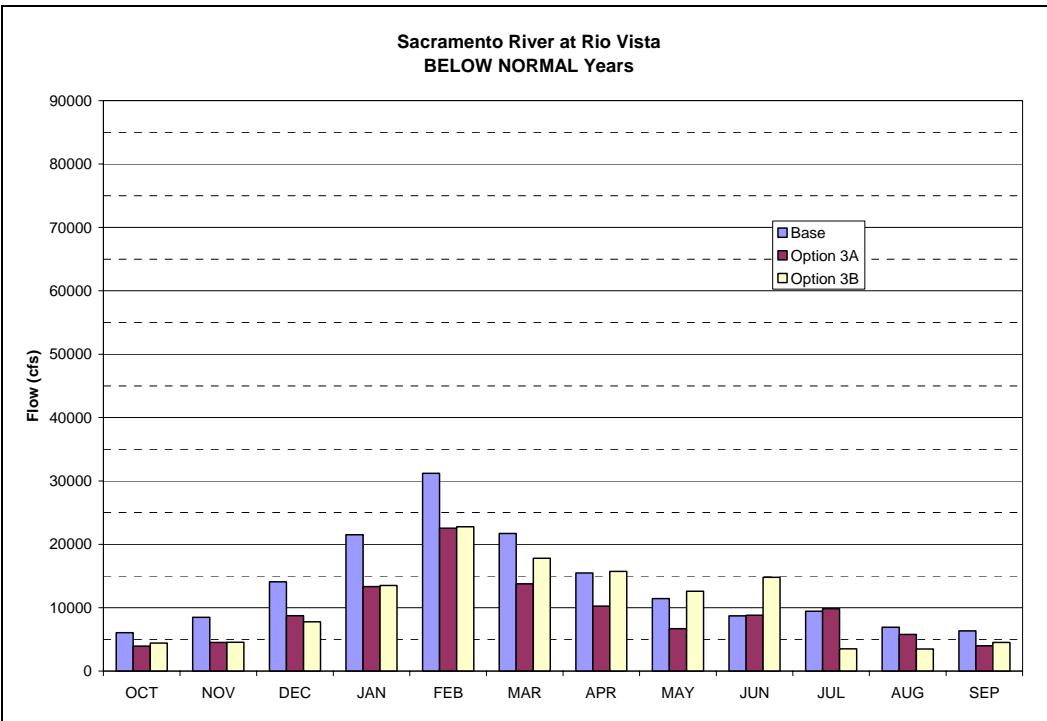


Figure F-1c. Sacramento River at Rio Vista Below Normal Year Average Flows

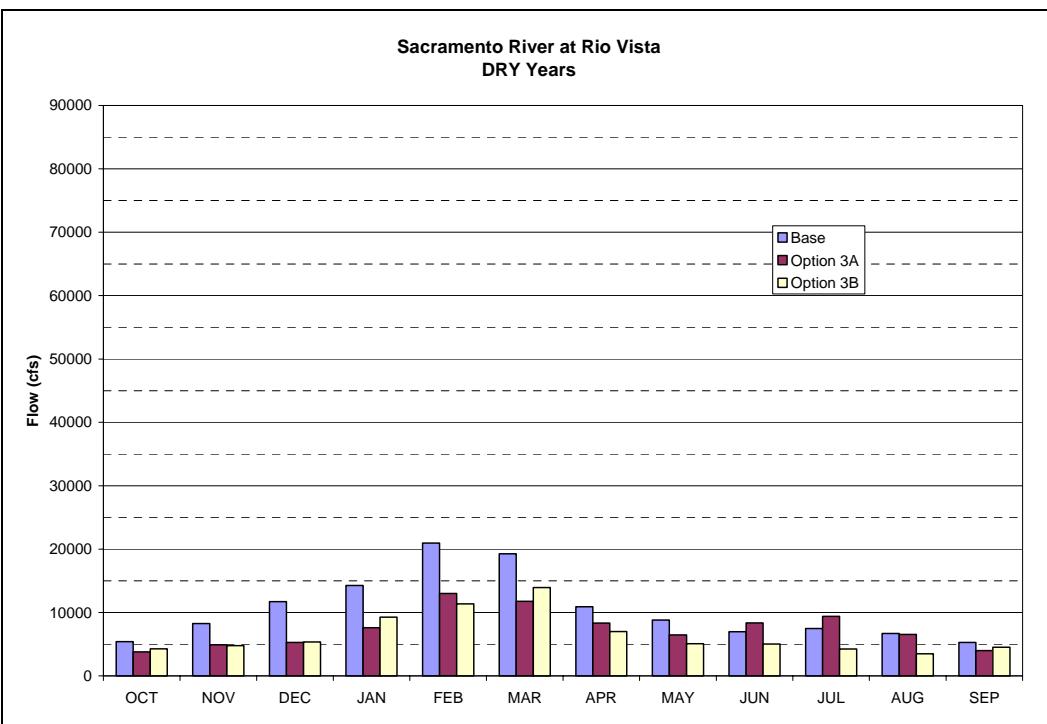


Figure F-1d. Sacramento River at Rio Vista Dry Year Average Flows

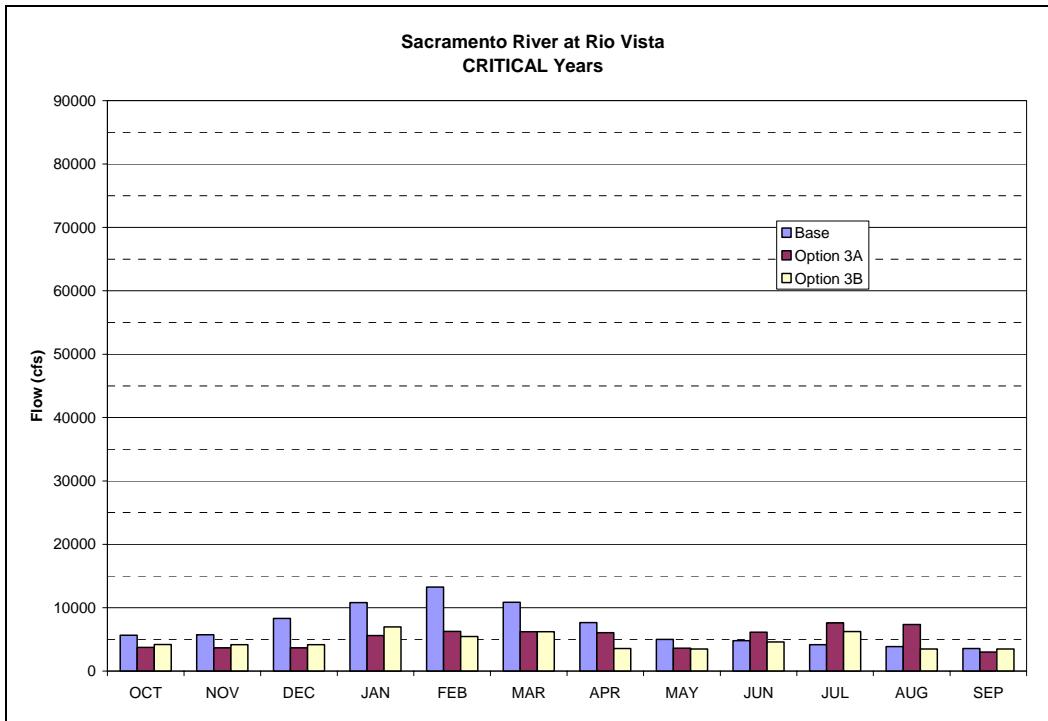


Figure F-1e. Sacramento River at Rio Vista Critical Year Average Flows

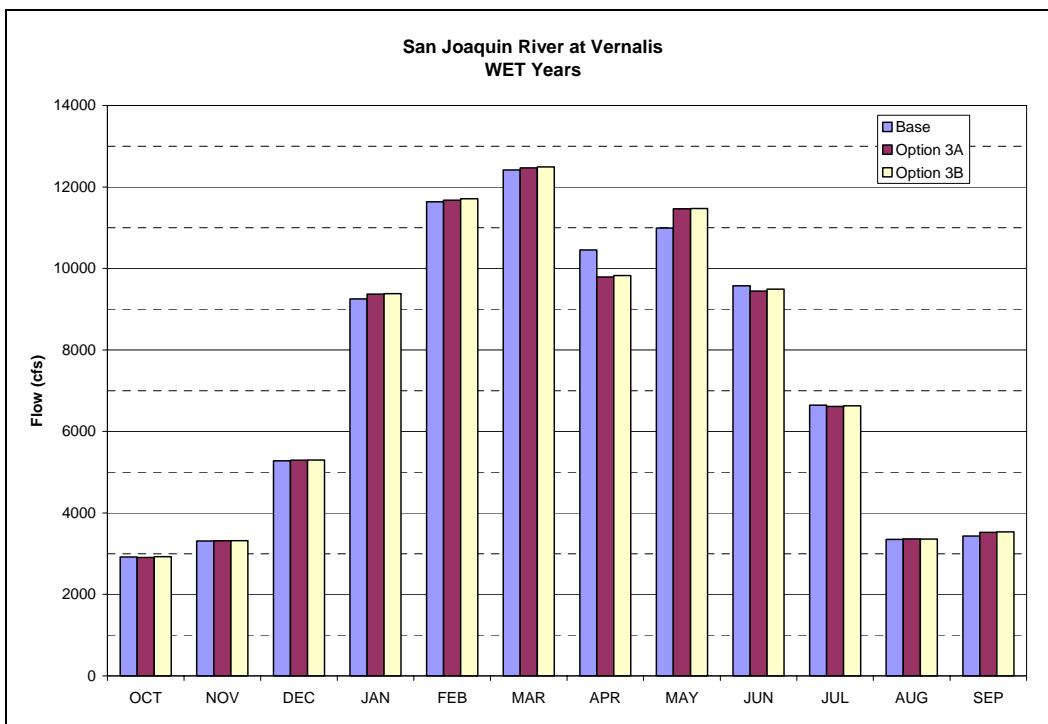


Figure F-2a. San Joaquin River at Vernalis Wet Year Average Flows

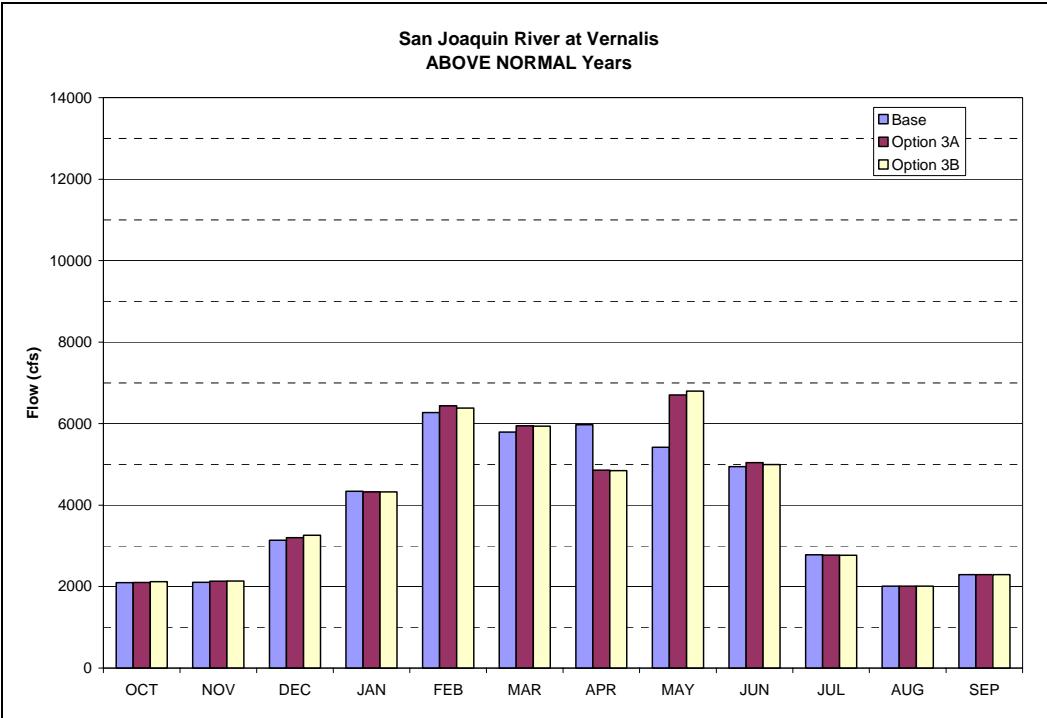


Figure F-2b. San Joaquin River at Vernalis Above Normal Year Average Flows

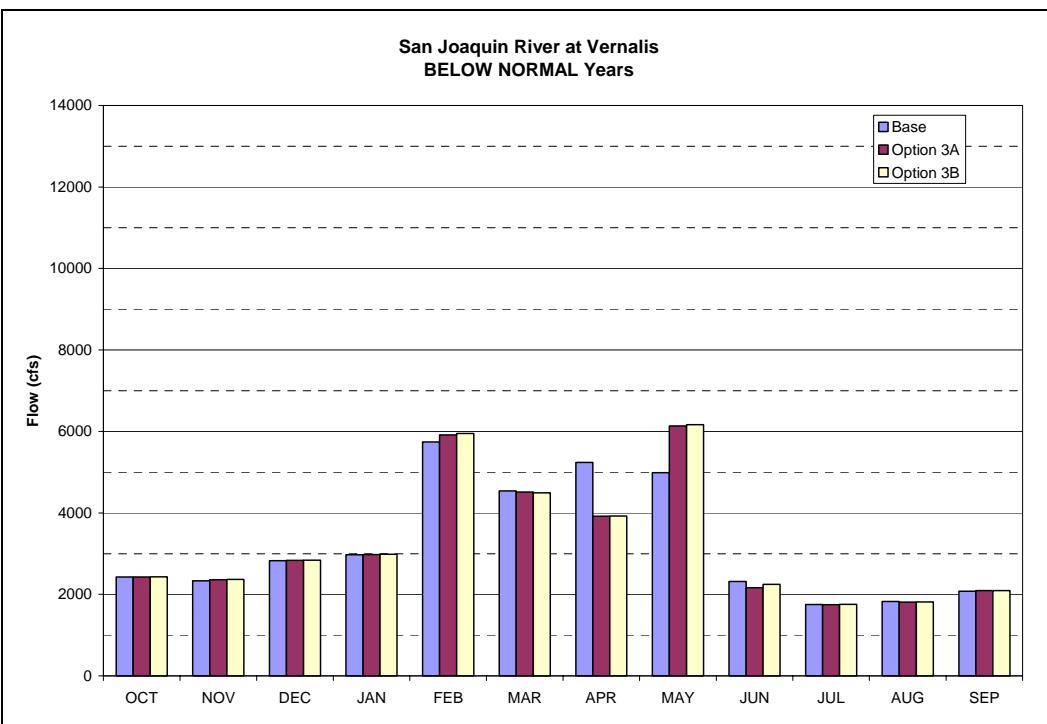


Figure F-2c. San Joaquin River at Vernalis Below Normal Year Average Flows

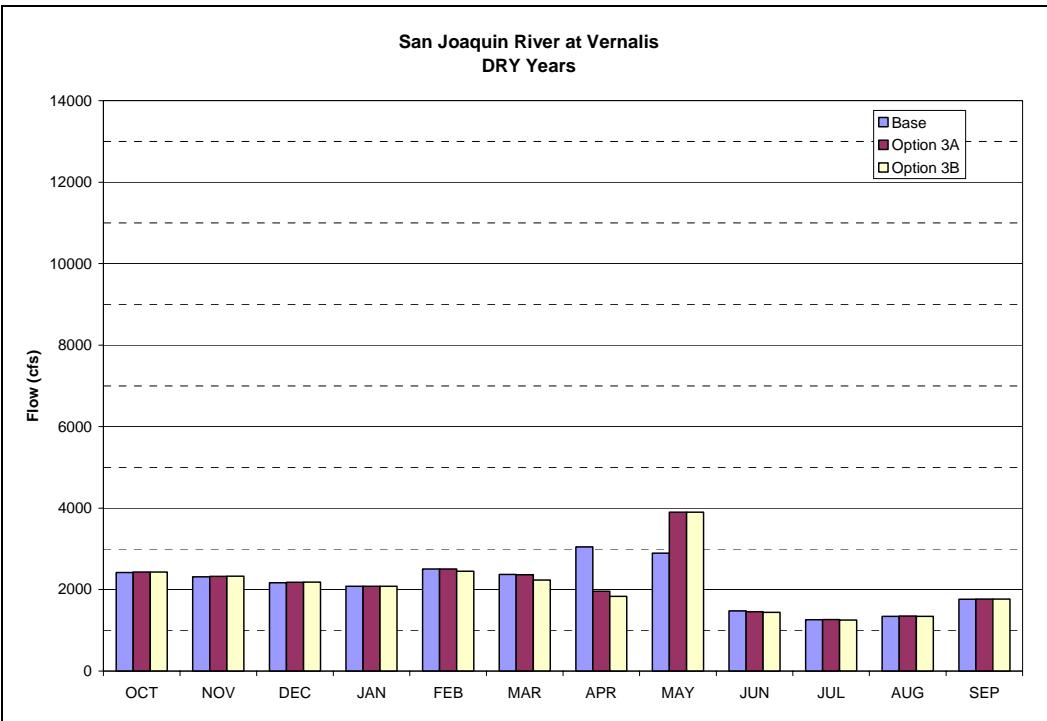


Figure F-2d. San Joaquin River at Vernalis Dry Year Average Flows

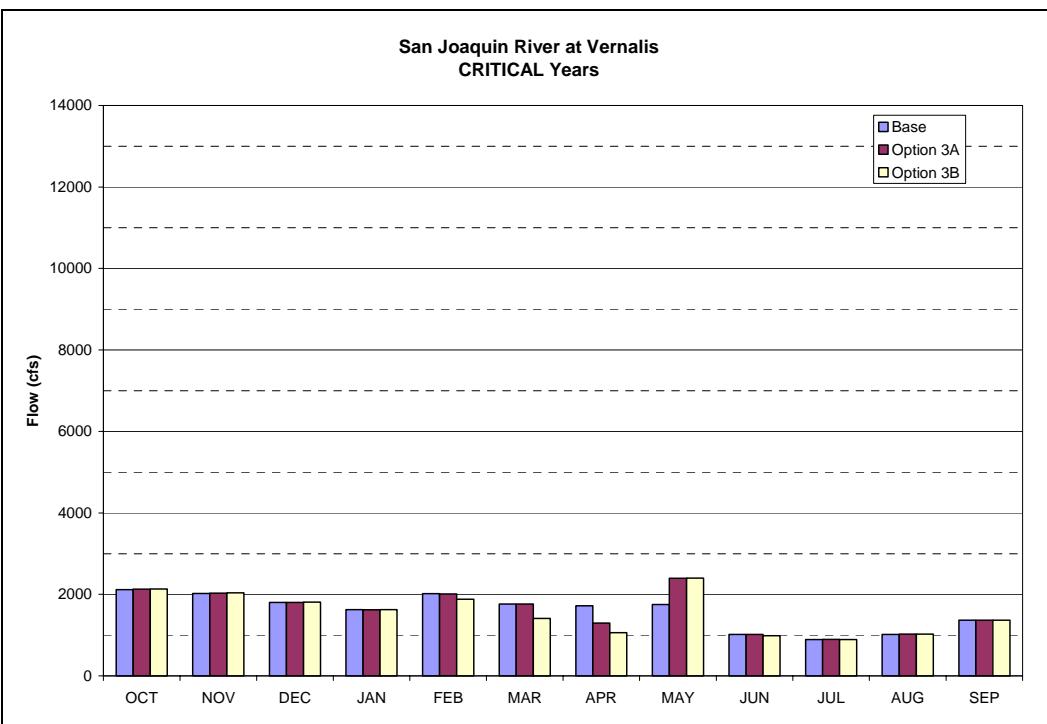


Figure F-2e. San Joaquin River at Vernalis Critical Year Average Flows

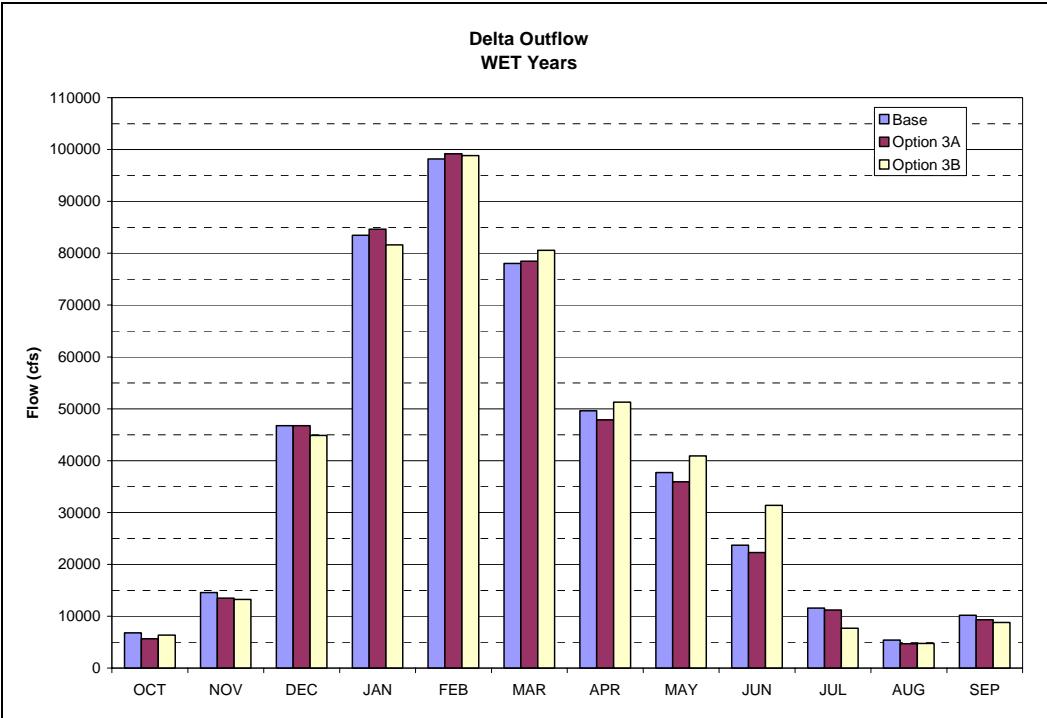


Figure F-3a. Delta Outflow Wet Year Average Flows

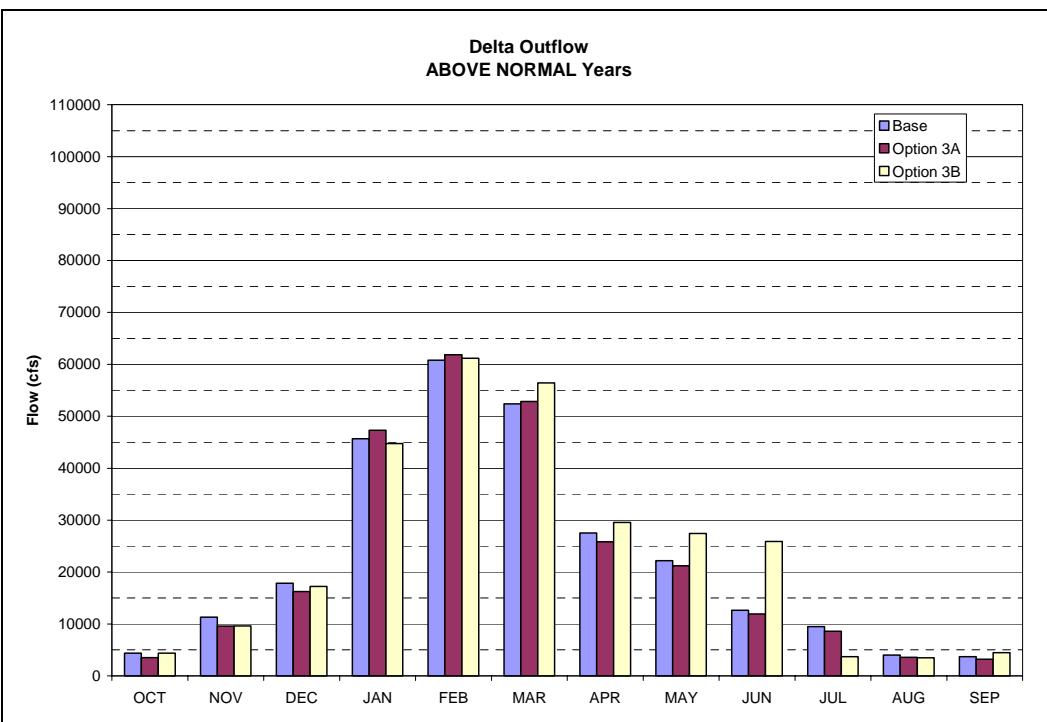


Figure F-3b. Delta Outflow Above Normal Year Average Flows

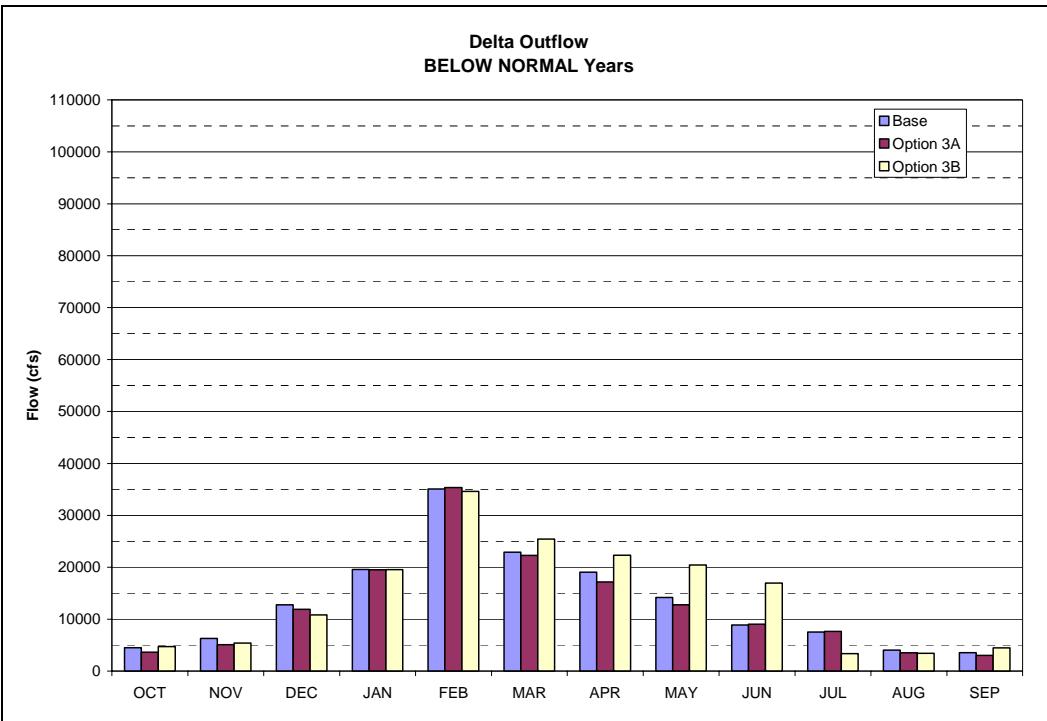


Figure F-3c. Delta Outflow Below Normal Year Average Flows

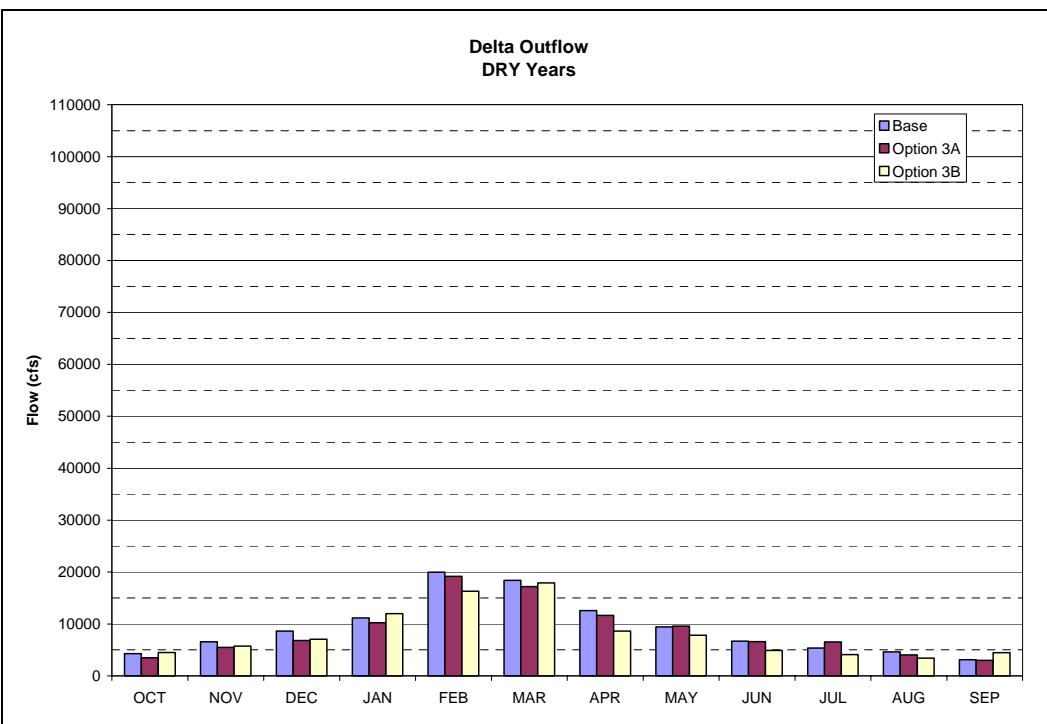


Figure F-3d. Delta Outflow Dry Year Average Flows

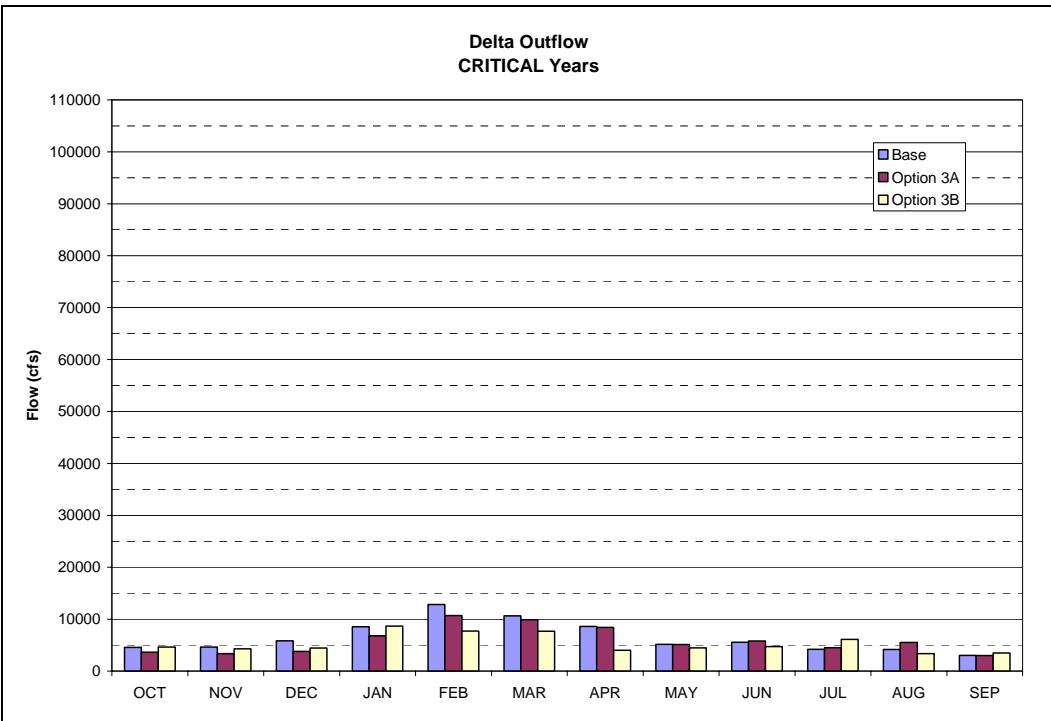


Figure F-3e. Delta Outflow Critical Year Average Flows

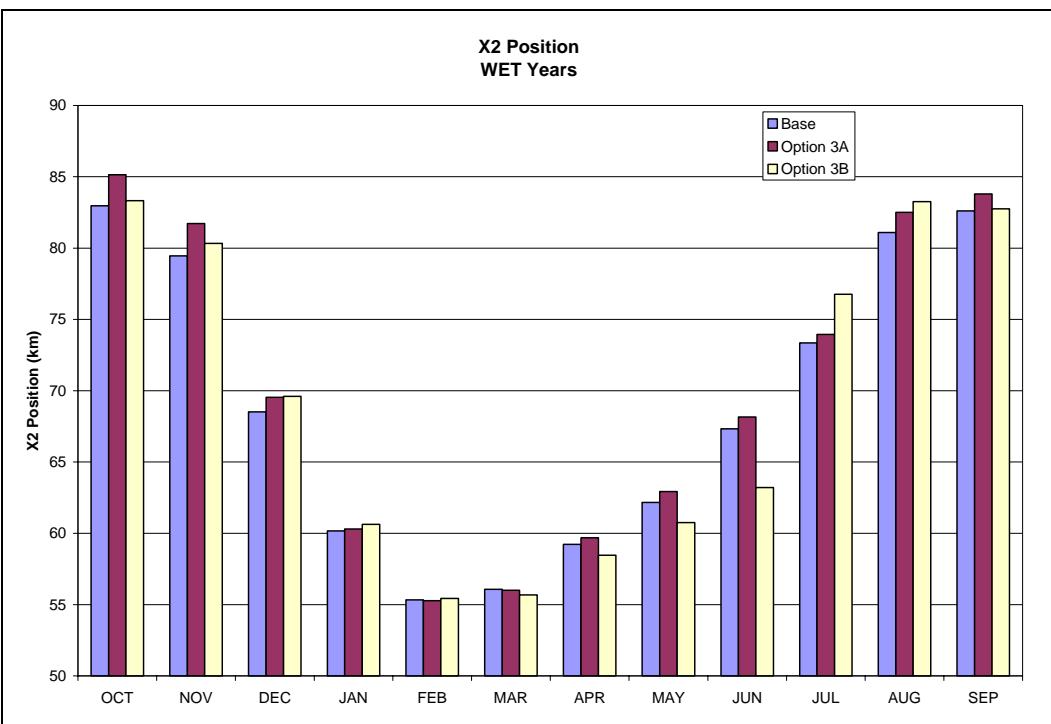


Figure F-4a. X2 Wet Year Average Distance

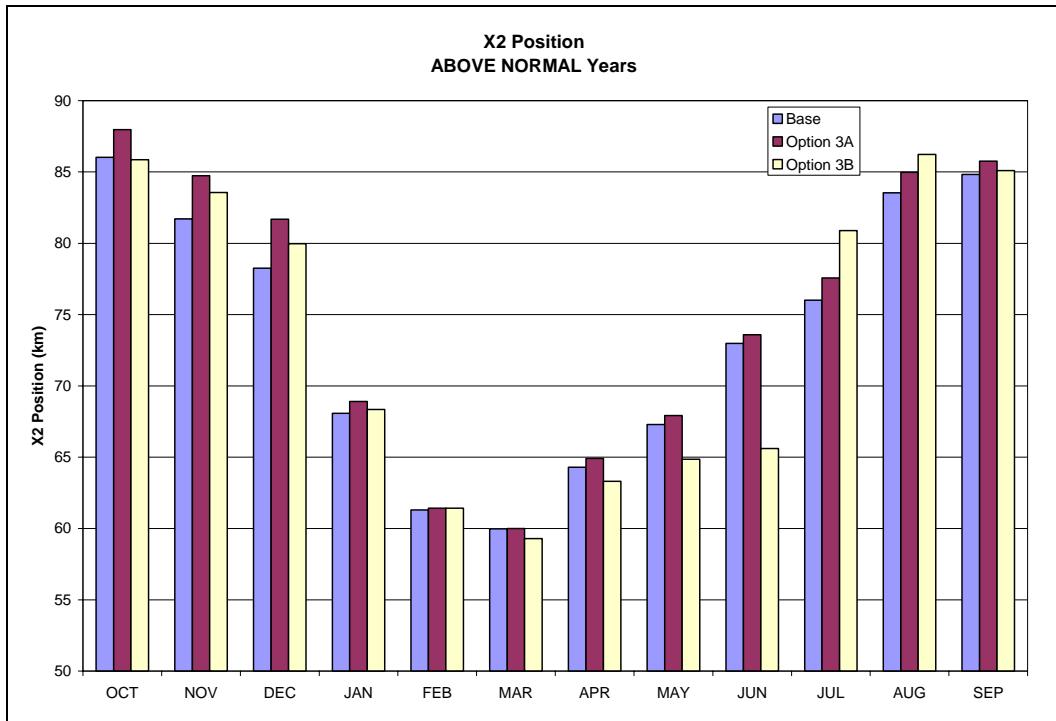


Figure F-4b. X2 Above Normal Year Average Distance

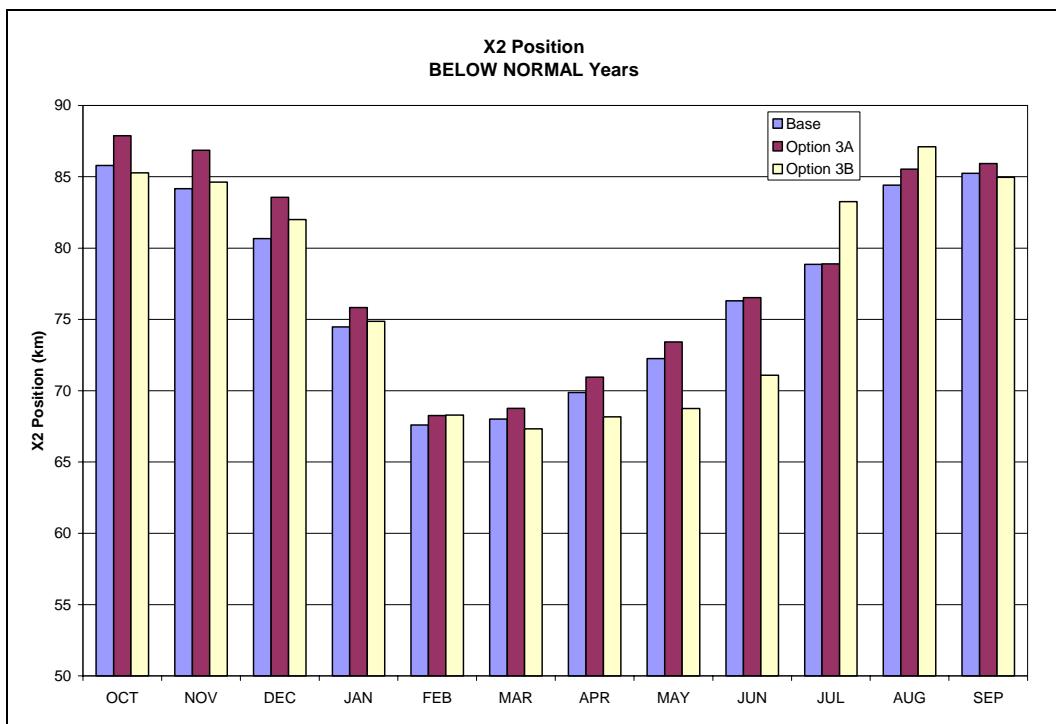
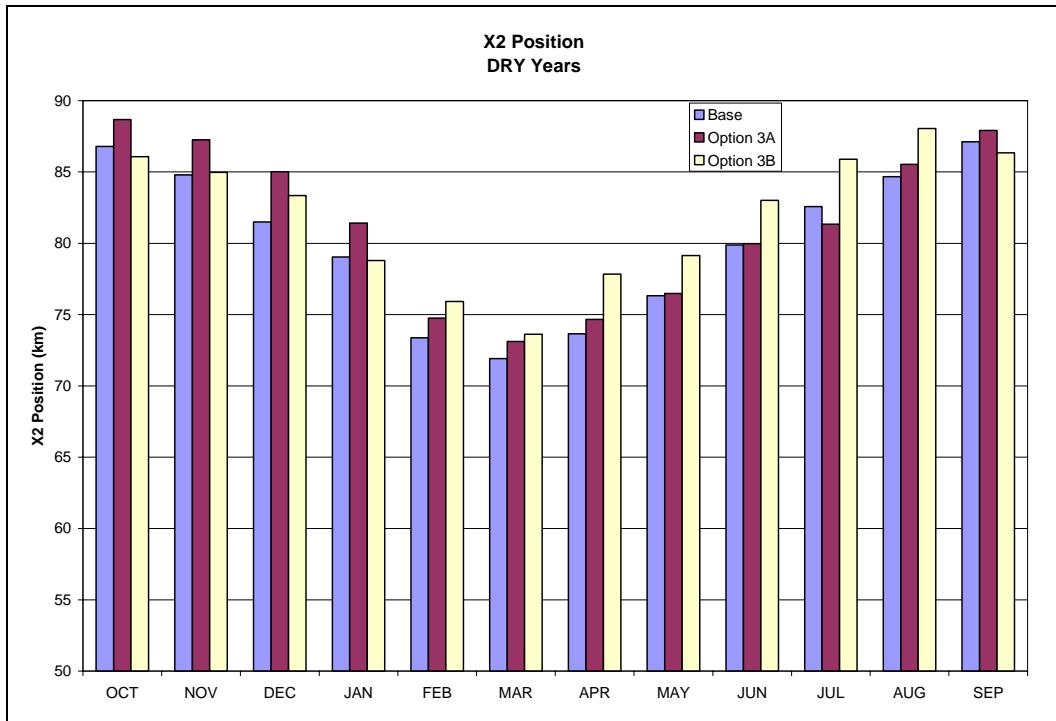


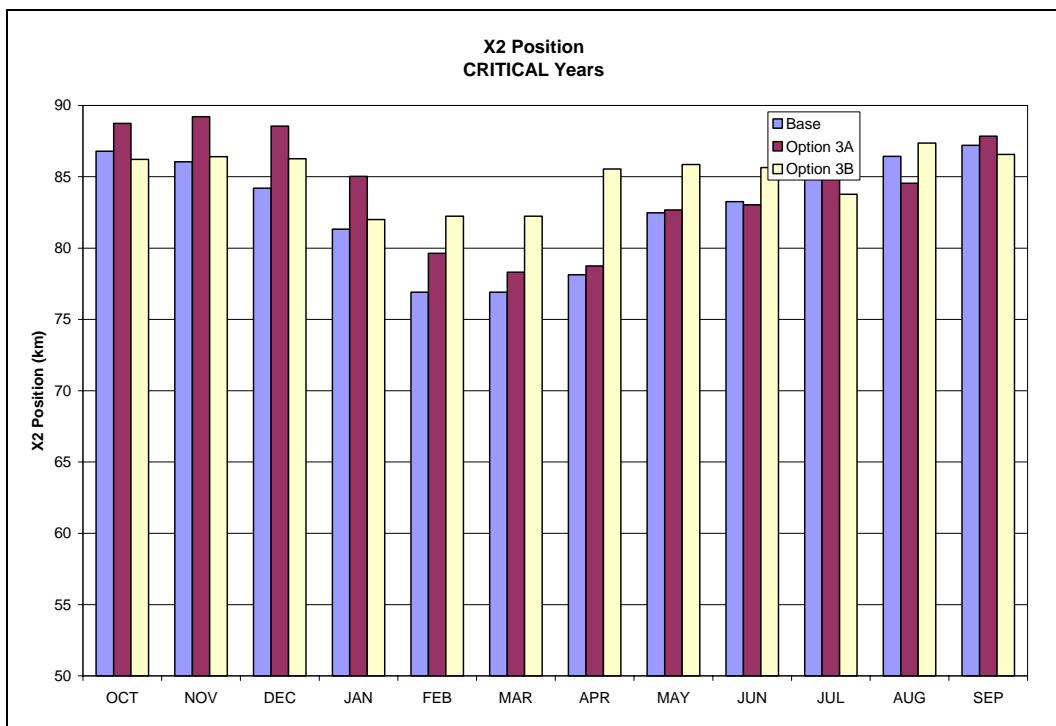
Figure F-4c. X2 Below Normal Year Average Distance



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2 **Figure F-4d. X2 Dry Year Average Distance**

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5 **Figure F-4e. X2 Critical Year Average Distance**

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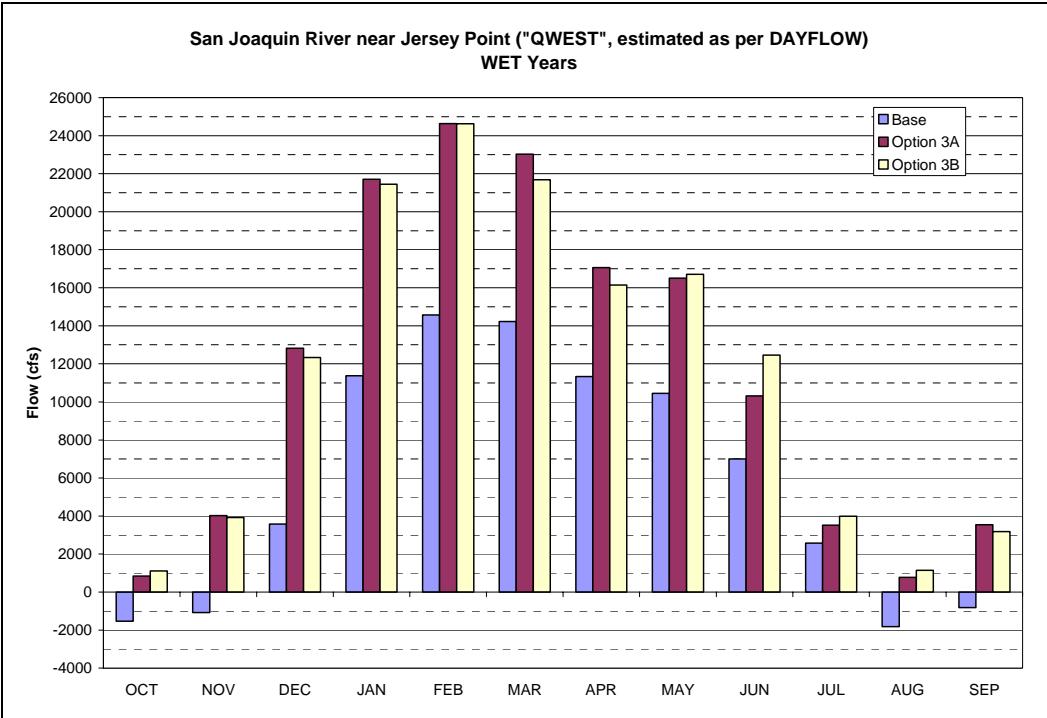


Figure F-5a. QWEST Wet Year Average Flows

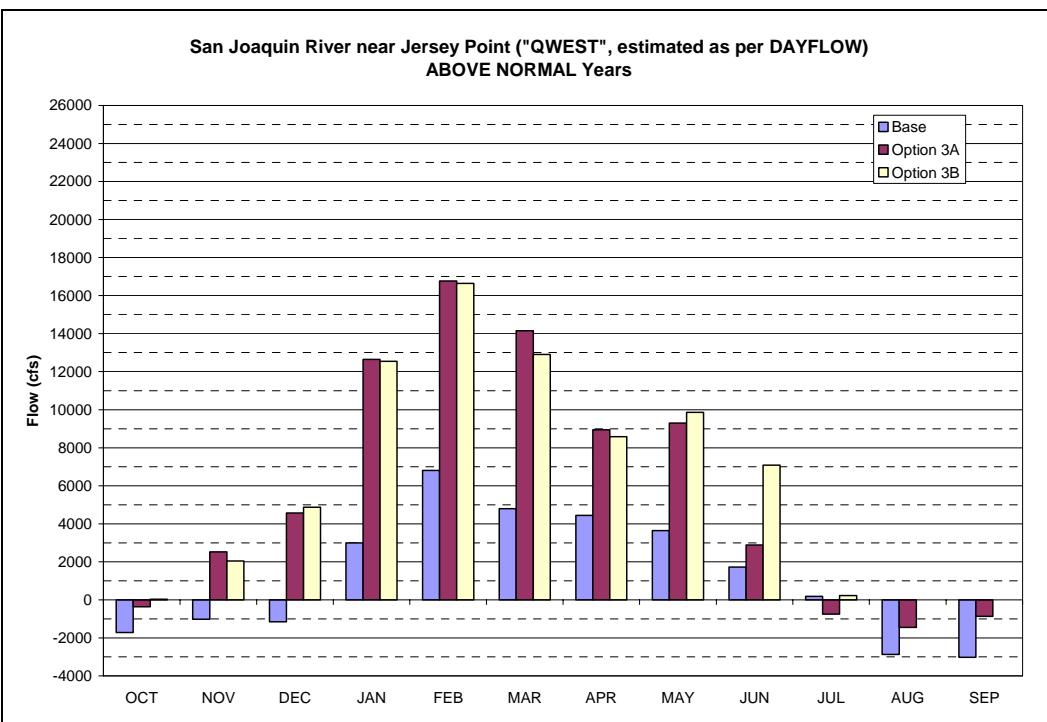
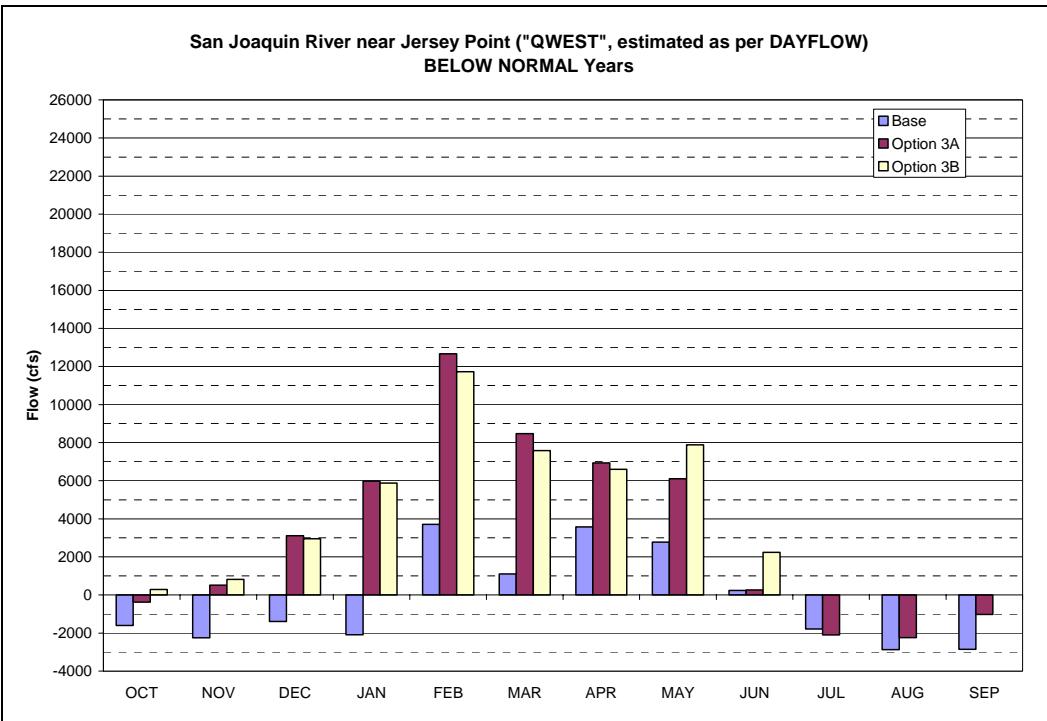


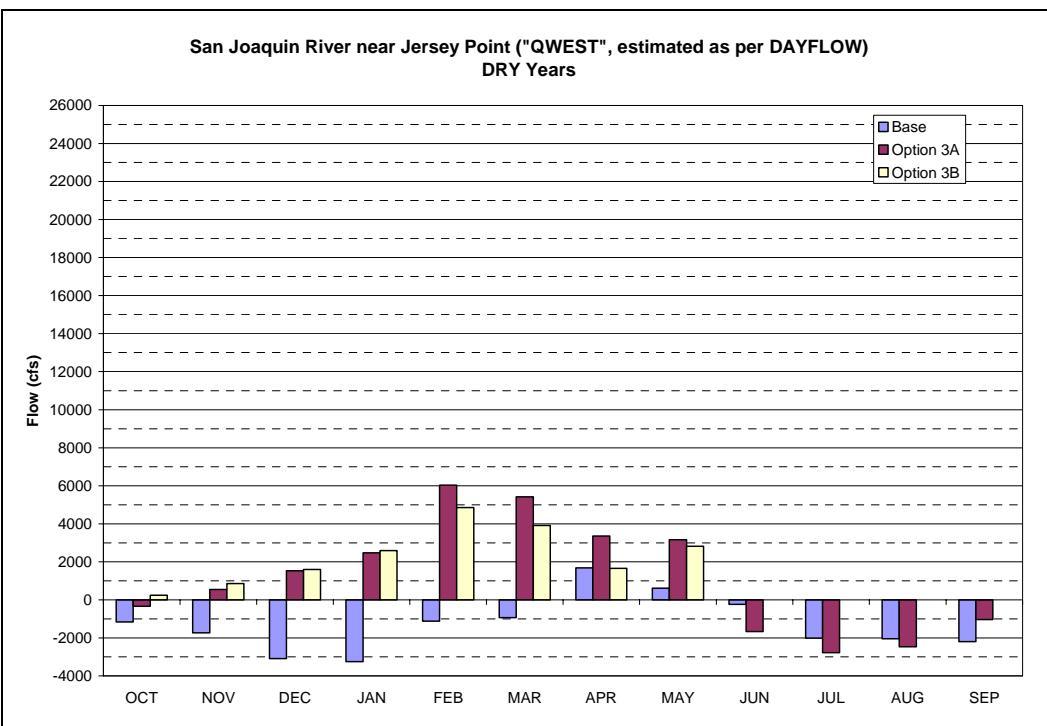
Figure F-5b. QWEST Above Normal Year Average Flows



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2 **Figure F-5c. QWEST Below Normal Year Average Flows**

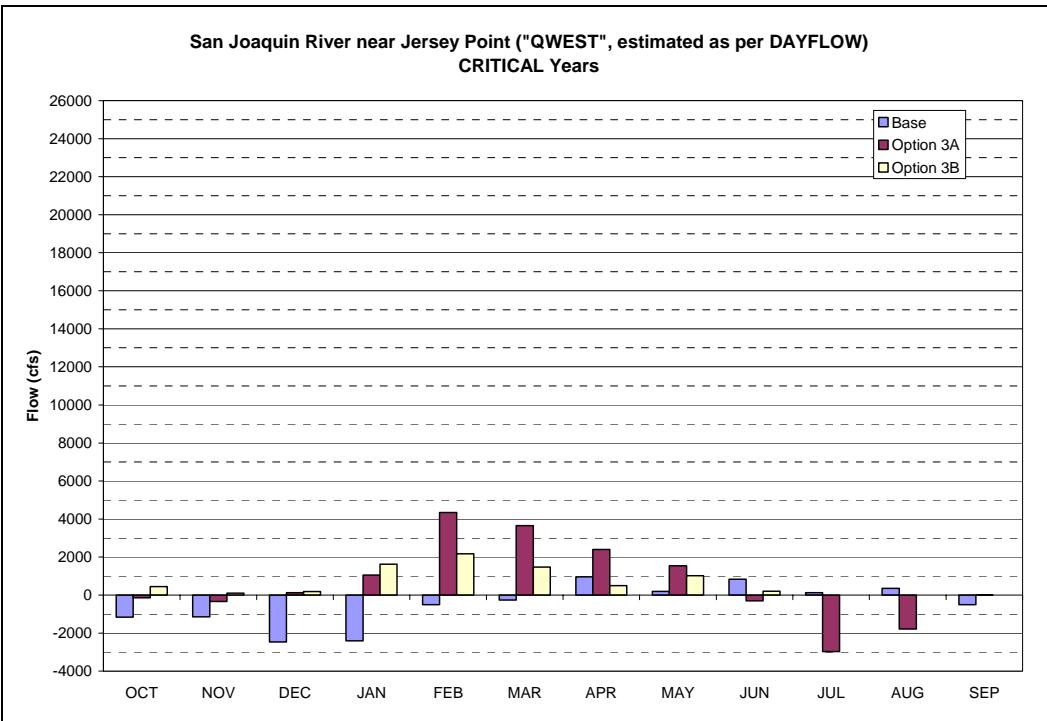
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5 **Figure F-5d. QWEST Dry Year Average Flows**

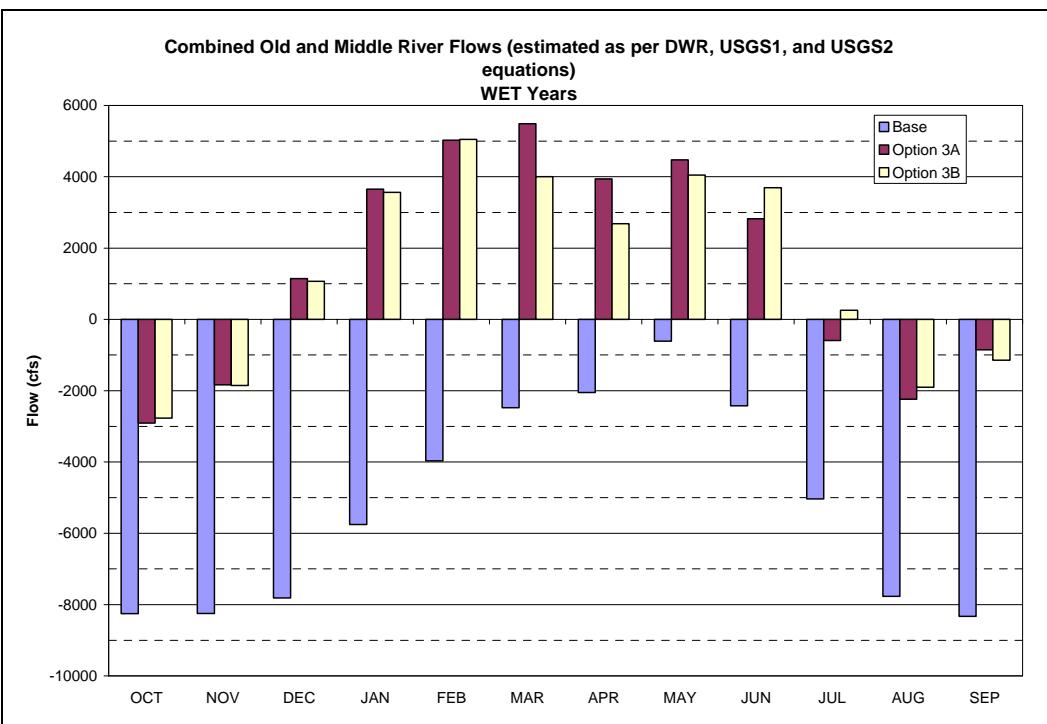
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2 **Figure F-5e. QWEST Critical Year Average Flows**

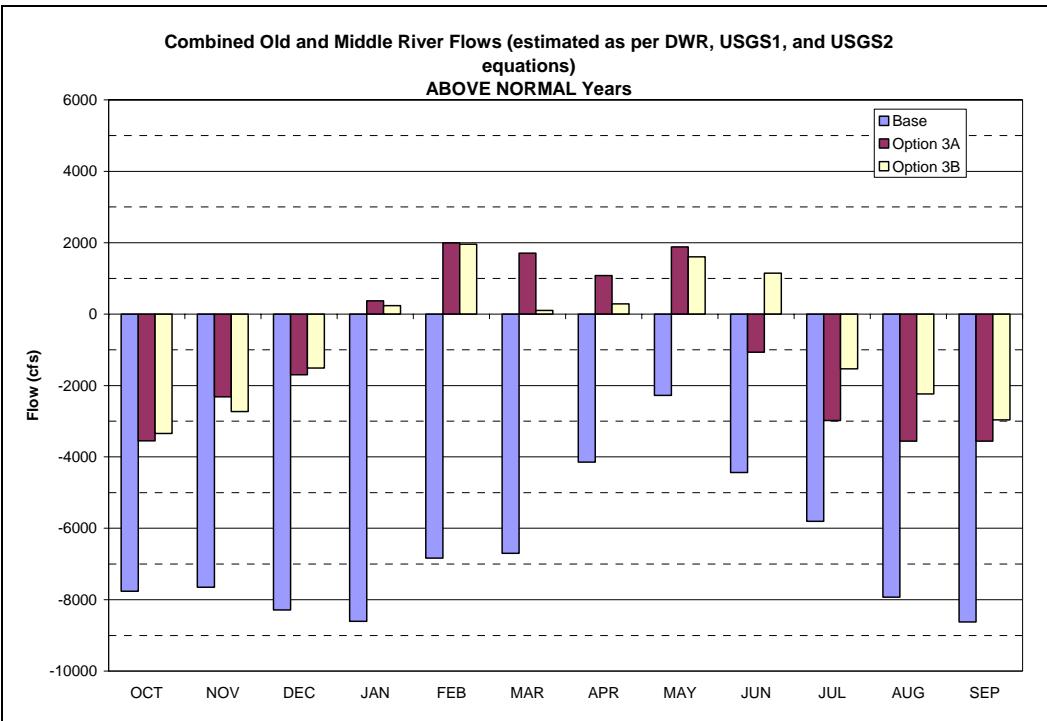
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5 **Figure F-6a. Combined Old and Middle River Wet Year Average Flows**

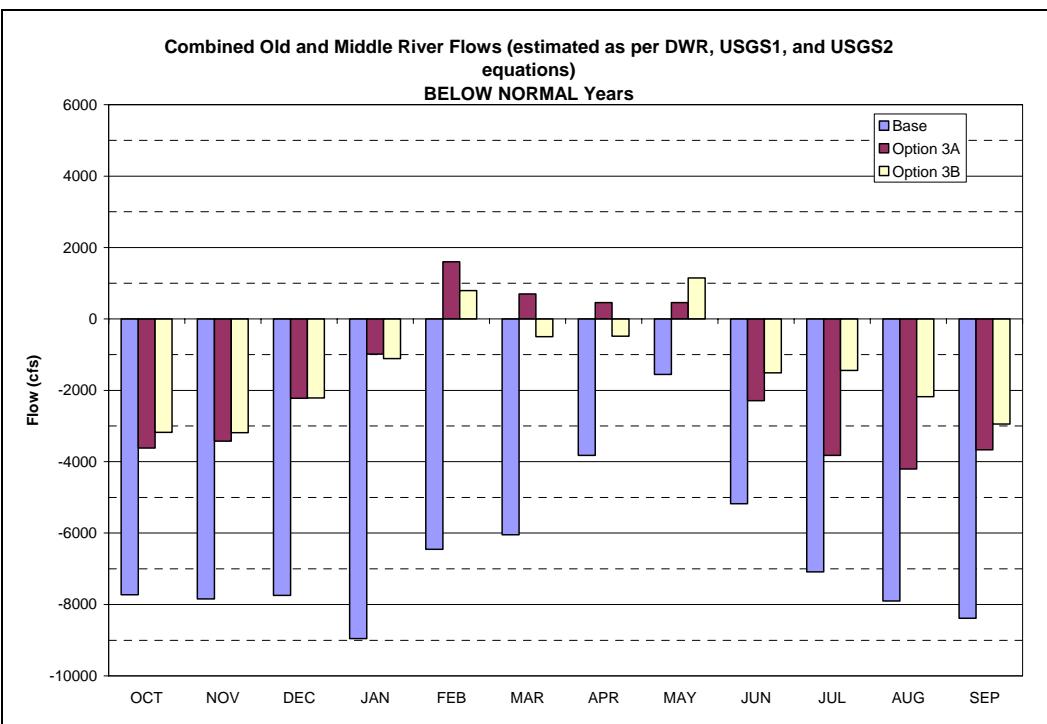
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2 **Figure F-6b. Combined Old and Middle River Above Normal Year Average Flows**

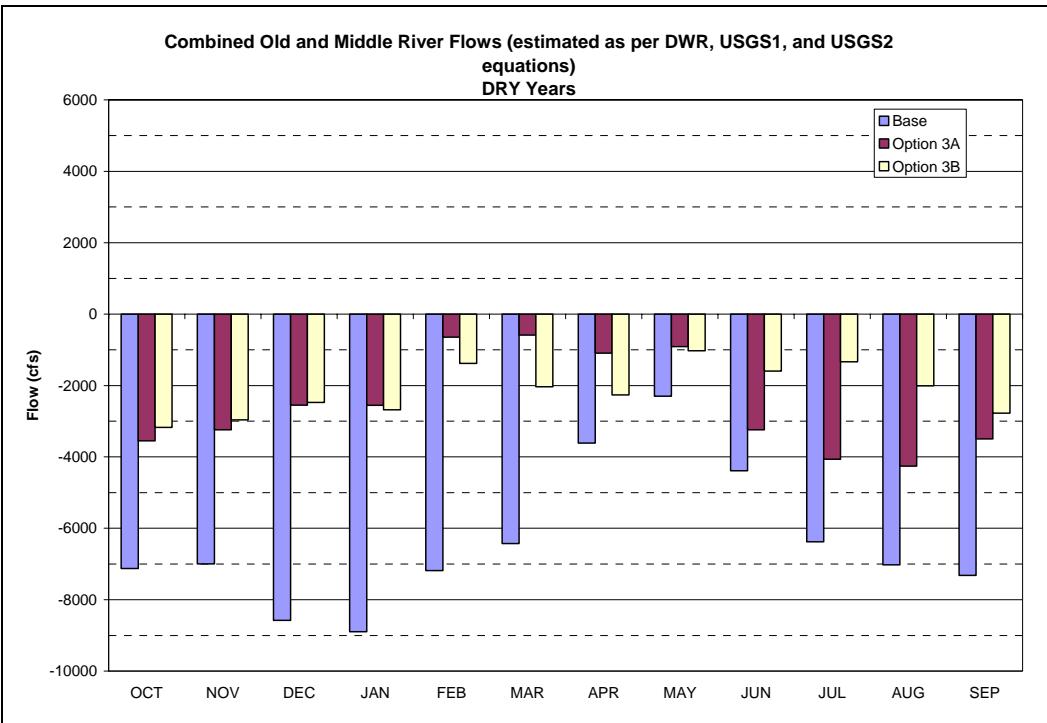
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5 **Figure F-6c. Combined Old and Middle River Below Normal Year Average Flows**

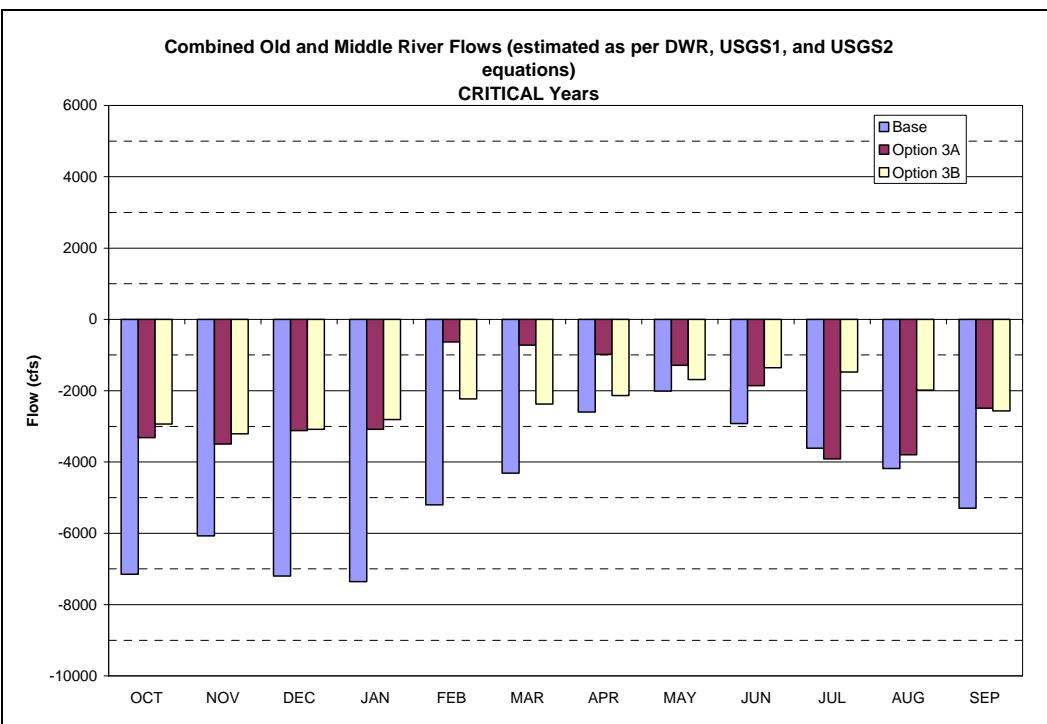
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2 **Figure F-6d. Combined Old and Middle River Dry Year Average Flows**

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5 **Figure F-6e. Combined Old and Middle River Critical Year Average Flows**

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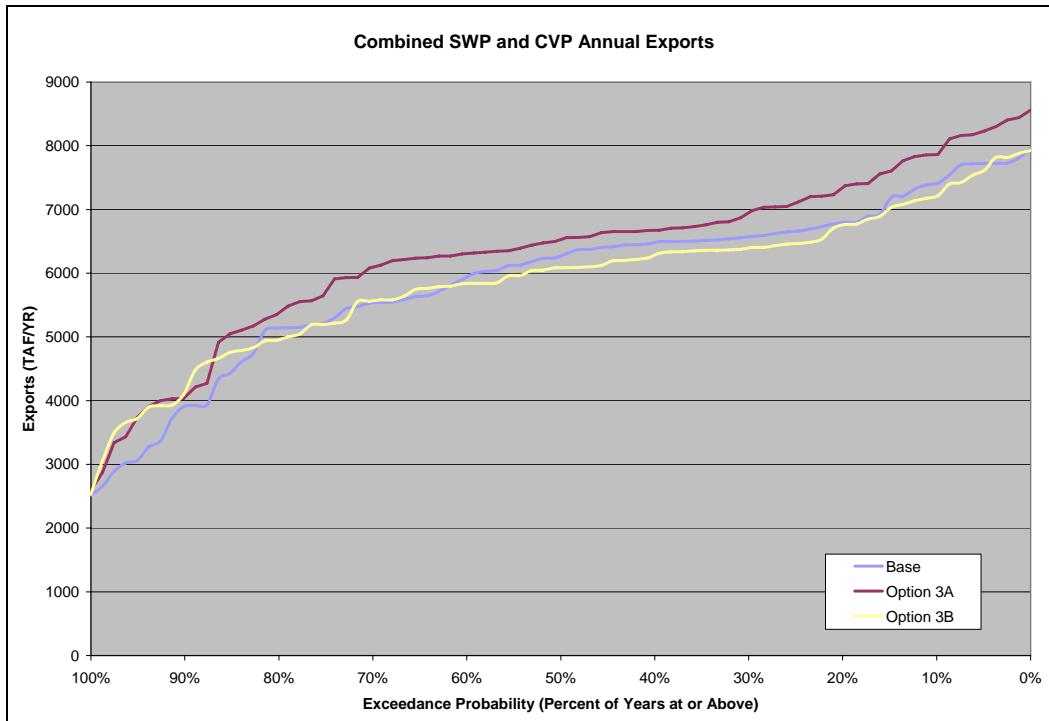


Figure F-7. Water Supply Frequency: Combined SWP and CVP Annual Delta Exports

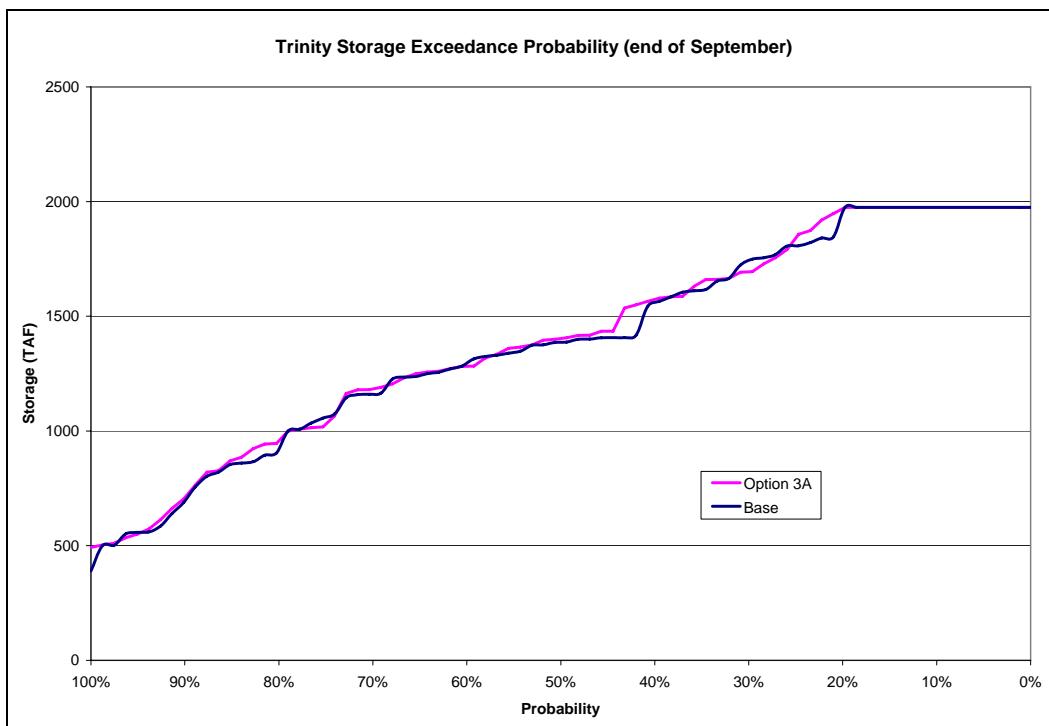


Figure F-8a. Option 3A CVP Northern Delta Storage Frequency: Trinity

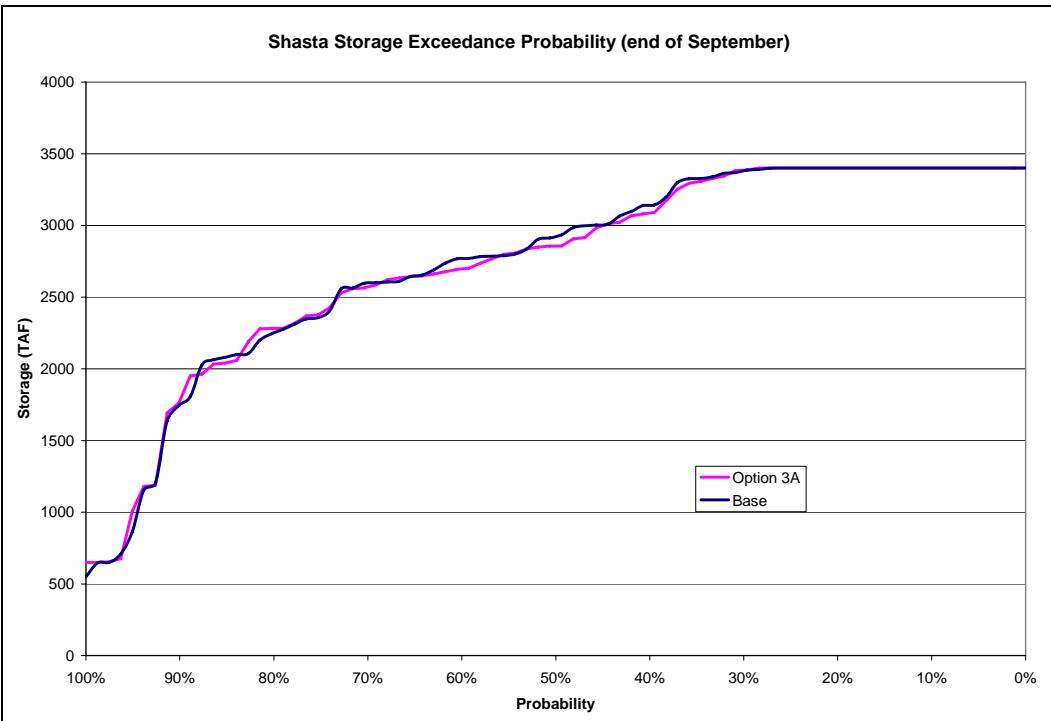


Figure F-8b. Option 3A CVP Northern Delta Storage Frequency: Shasta

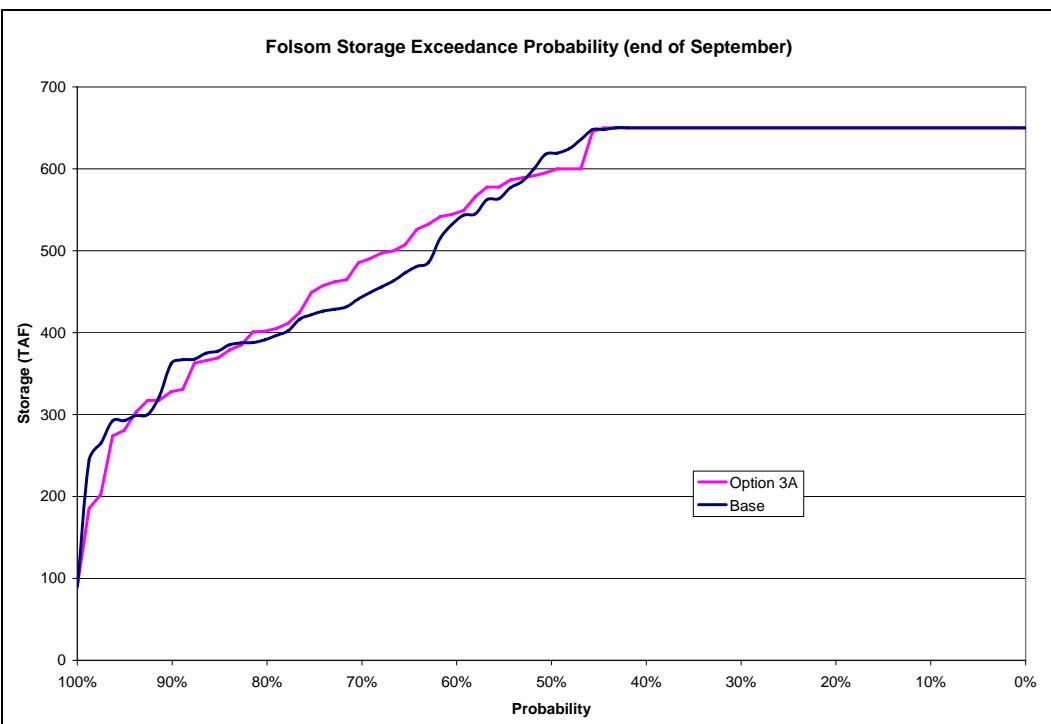
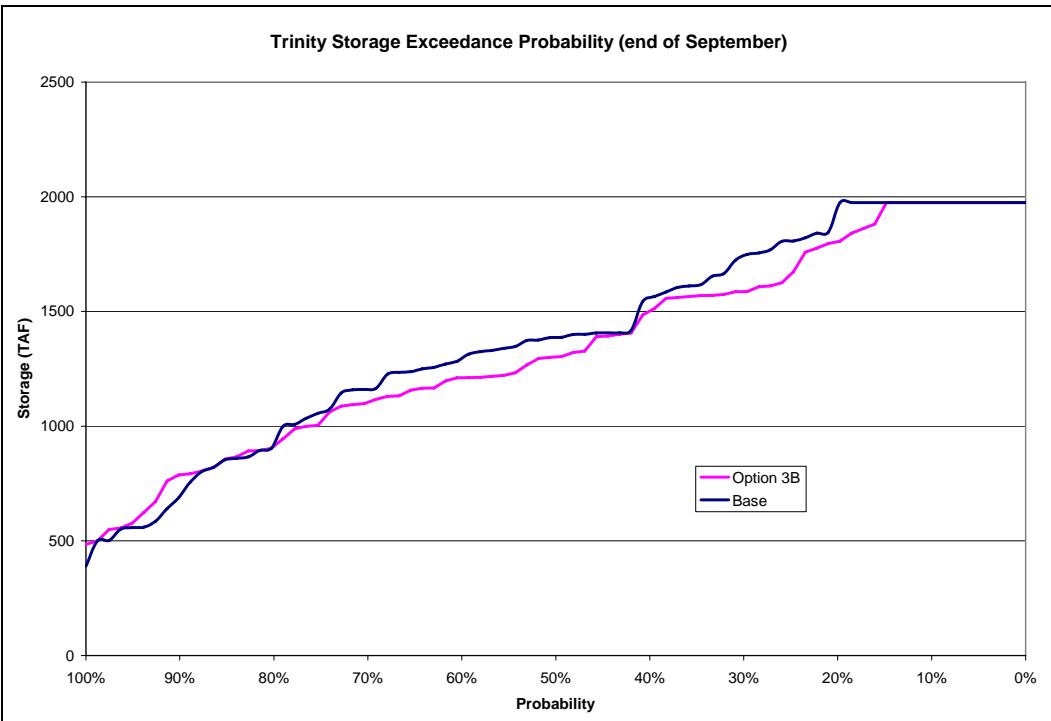
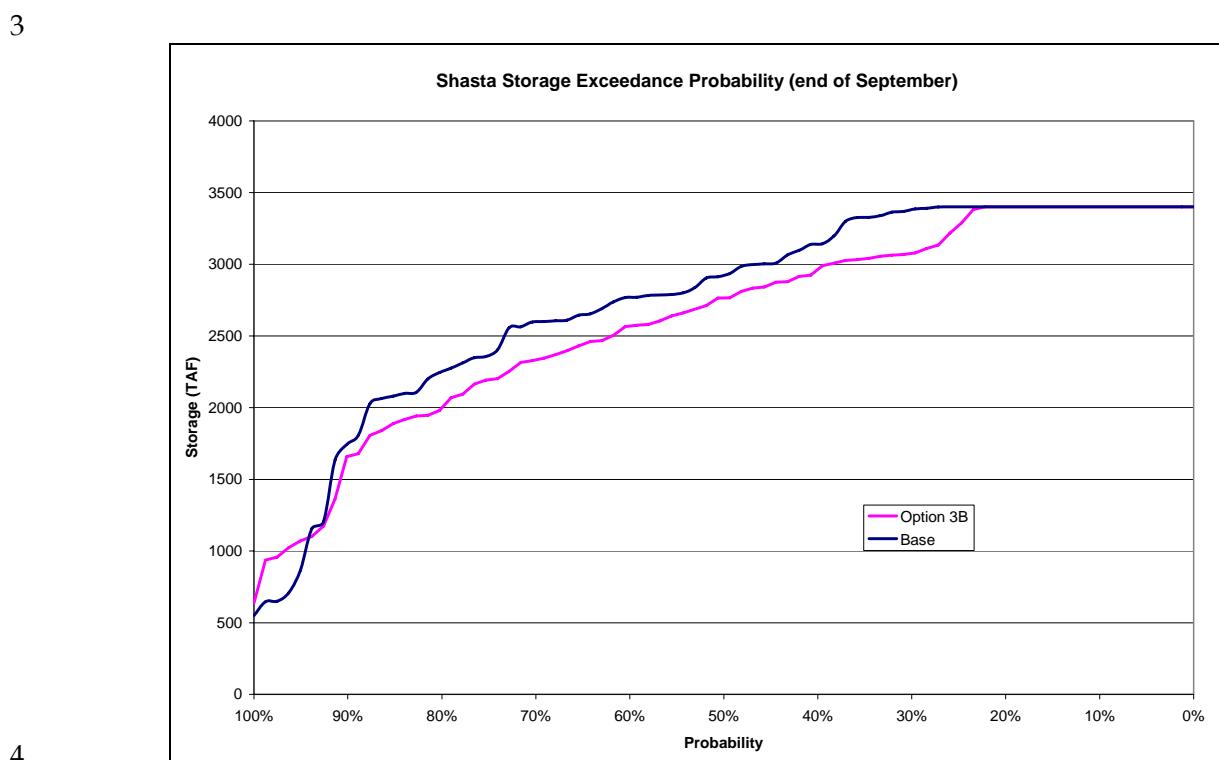


Figure F-8c. Option 3A CVP Northern Delta Storage Frequency: Folsom



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2 **Figure F-9a. Option 3B CVP Northern Delta Storage Frequency: Trinity**



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5 **Figure F-9b. Option 3B CVP Northern Delta Storage Frequency: Shasta**

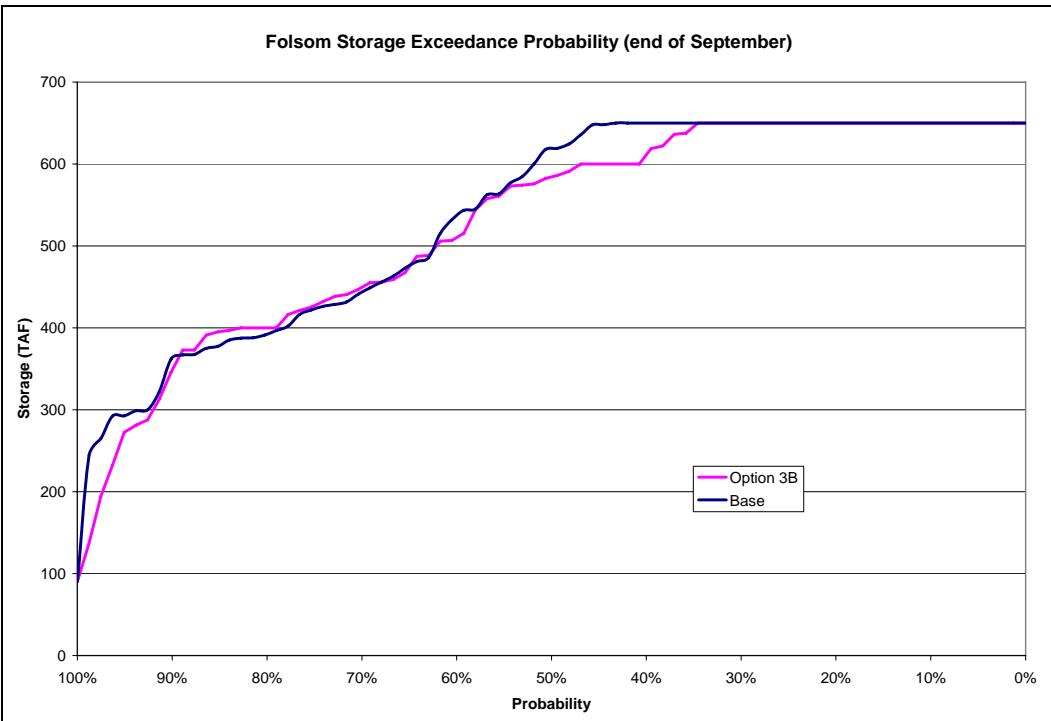


Figure F-9c. Option 3B CVP Northern Delta Storage Frequency: Folsom

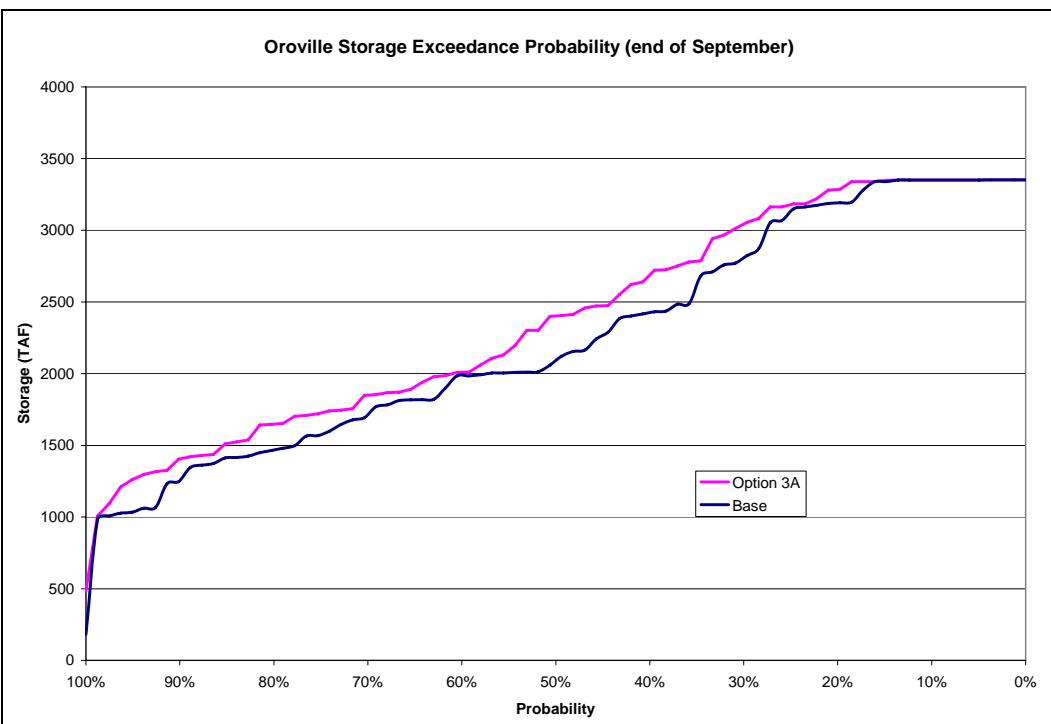


Figure F-10. Option 3A SWP Northern Delta Storage Frequency: Oroville

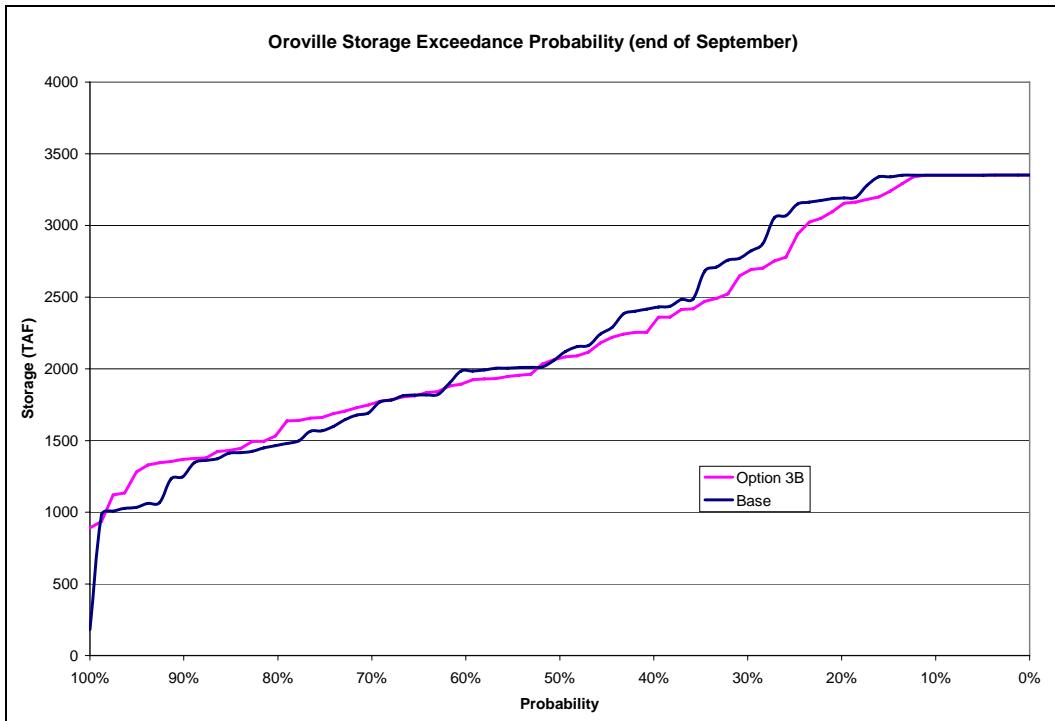


Figure F-11. Option 3B SWP Northern Delta Storage Frequency: Oroville

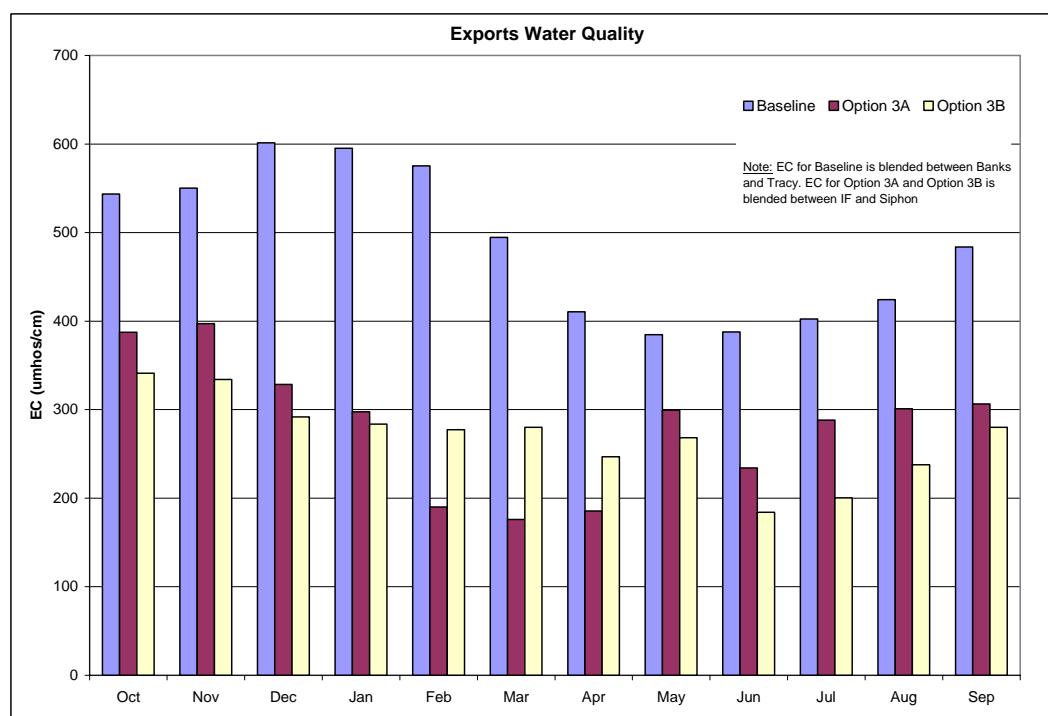


Figure F-12. Export Water Quality Annual Average, 1975-1991

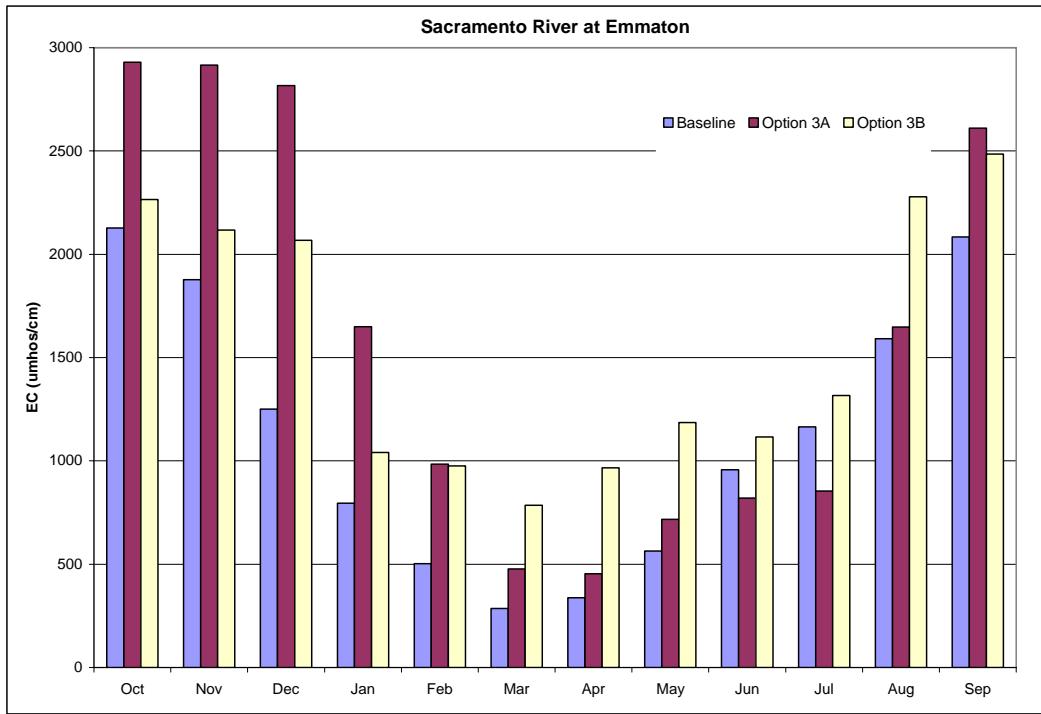


Figure F-13. In Delta Water Quality Annual Average, 1975-1991: Sacramento River at Emmaton

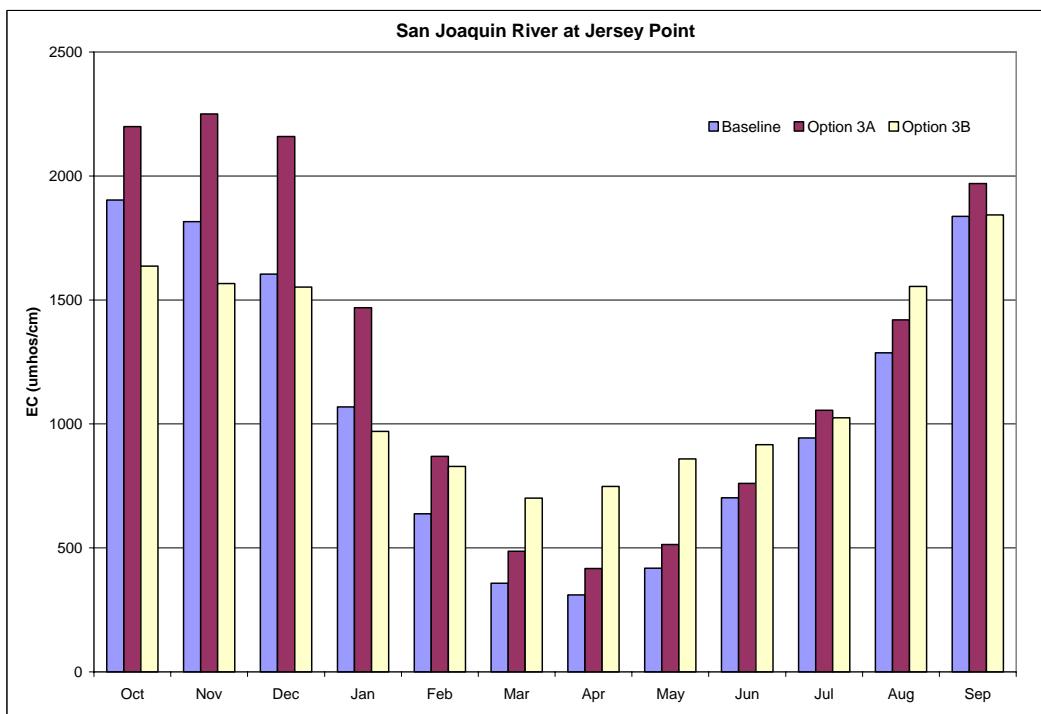
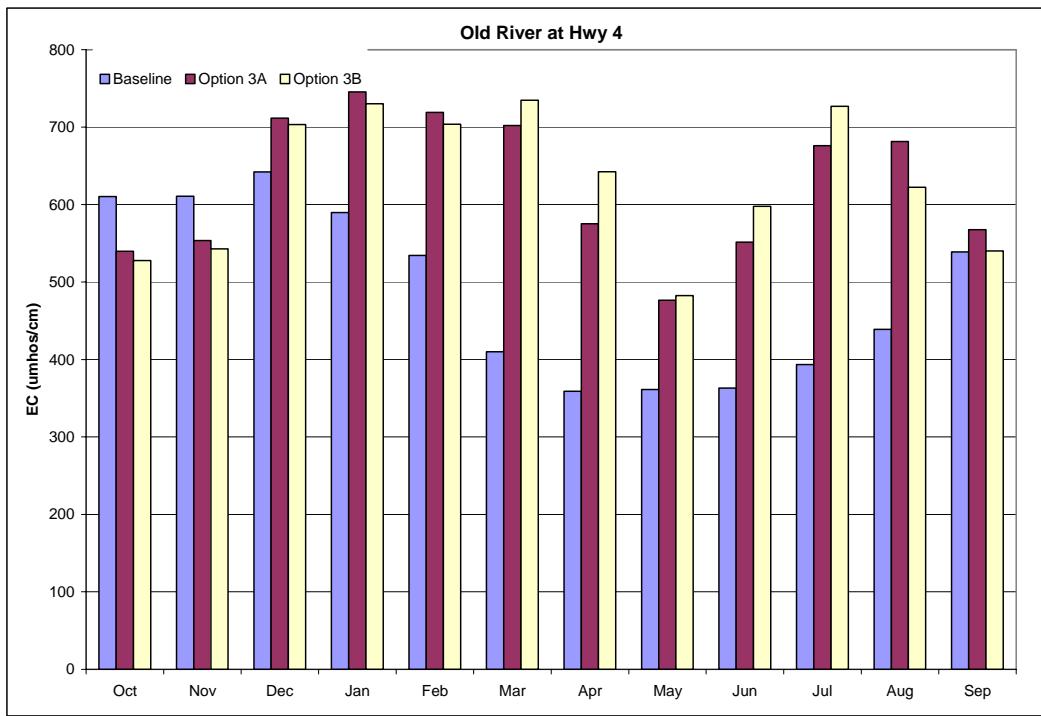


Figure F-14. In Delta Water Quality Annual Average, 1975-1991: San Joaquin River at Jersey Point



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2 **Figure F-15. In Delta Water Quality Annual Average, 1975-1991: Old River at Hwy 4**

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1 Table F-2. Option 3A Cumulative Particle Fate - September 1977

		Old River Sep 1977 Release - Cumulative particles (%)									
		7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 3A	Base	Option 3A	Base	Option 3A	Base	Option 3A	Base	Option 3A	
DIVERSION_AG	1.7	0.3	4.0	0.5	5.0	0.9	5.6	1.4	6.7	2.6	
PAST_CHIPPS	0.0	0.0	0.0	0.1	0.1	1.8	0.3	3.4	1.7	11.8	
TO_SUISUN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
EXPORTS*	53.1	0.0	67.5	0.0	75.3	0.0	79.9	0.0	84.3	2.5	
CENTRAL	45.2	99.7	28.5	99.4	19.6	97.3	14.2	95.2	7.3	83.1	

		Middle River Sep 1977 Release - Cumulative particles (%)									
		7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 3A	Base	Option 3A	Base	Option 3A	Base	Option 3A	Base	Option 3A	
DIVERSION_AG	0.4	0.3	1.2	0.5	1.7	1.0	2.8	1.0	3.4	1.6	
PAST_CHIPPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
TO_SUISUN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
EXPORTS*	32.3	0.0	63.5	2.0	80.8	40.8	88.5	51.7	93.3	77.7	
CENTRAL	67.3	99.7	35.3	97.5	17.5	58.2	8.7	47.3	3.3	20.7	

		San Joaquin River d/s of Dutch Slough Sep 1977 Release - Cumulative particles (%)									
		7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 3A	Base	Option 3A	Base	Option 3A	Base	Option 3A	Base	Option 3A	
DIVERSION_AG	0.0	0.0	0.1	0.0	0.1	0.0	0.3	0.1	0.7	0.2	
PAST_CHIPPS	17.0	18.0	17.9	16.5	37.4	35.9	34.8	32.9	48.9	49.4	
TO_SUISUN	0.1	0.3	0.0	0.0	0.3	0.3	0.0	0.1	0.2	0.0	
EXPORTS*	0.0	0.0	0.5	0.0	2.1	0.0	4.5	0.0	11.0	0.8	
CENTRAL	82.9	81.7	81.5	83.5	60.1	63.8	60.4	66.9	39.2	49.6	

		Sacramento River Sep 1977 Release - Cumulative particles (%)									
		7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 3A	Base	Option 2B	Base	Option 3A	Base	Option 3A	Base	Option 3A	
DIVERSION_AG	0.1	0.1	0.2	0.1	0.3	0.3	0.7	0.6	1.2	1.1	
PAST_CHIPPS	0.3	0.0	1.1	1.4	9.0	10.1	10.0	11.0	20.6	23.0	
TO_SUISUN	0.0	0.1	0.0	0.0	0.3	0.1	0.0	0.0	0.3	0.1	
EXPORTS*	0.0	0.0	0.9	0.0	4.6	0.0	9.6	0.1	20.2	2.1	
CENTRAL	99.6	99.8	97.8	98.5	85.8	89.5	79.7	88.3	57.7	73.7	

		San Joaquin River u/s of HOR Sep 1977 Release - Cumulative particles (%)									
		7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 3A	Base	Option 3A	Base	Option 3A	Base	Option 3A	Base	Option 3A	
DIVERSION_AG	7.1	2.3	7.9	4.4	9.8	7.1	11.2	9.7	13.6	13.9	
PAST_CHIPPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
TO_SUISUN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
EXPORTS*	30.3	0.0	32.4	0.0	33.5	0.0	46.5	0.0	67.1	14.6	
CENTRAL	62.6	97.7	59.7	95.6	56.7	92.9	42.3	90.3	19.3	71.4	

* In Baseline, Exports is the sum of particles entering SWP and CVP. In the Option 3, it is the sum of particles leaving through IF diversion and Victoria Canal Siphon

1 Table F-3. Option 3A Cumulative Particle Fate - January 1981

	Old River Jan 1981 Release - Cumulative particles (%)									
	7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 3A	Base	Option 3A	Base	Option 3A	Base	Option 3A	Base	Option 3A
DIVERSION_AG	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.0
PAST_CHIPPS	0.2	3.1	0.2	28.9	0.2	50.1	0.3	72.4	0.3	81.1
TO_SUISUN	0.0	0.9	0.0	2.9	0.0	4.9	0.0	6.6	0.0	8.2
EXPORTS*	90.4	0.0	95.1	0.0	97.6	0.0	98.0	0.0	98.7	0.0
CENTRAL	9.4	96.0	4.7	68.2	2.2	45.0	1.5	21.0	0.8	10.7

	Middle River Jan 1981 Release - Cumulative particles (%)									
	7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 3A	Base	Option 3A	Base	Option 3A	Base	Option 3A	Base	Option 3A
DIVERSION_AG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
PAST_CHIPPS	0.0	0.0	0.0	0.2	0.0	1.1	0.0	6.5	0.0	13.9
TO_SUISUN	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.0	1.2
EXPORTS*	82.2	0.0	97.2	0.0	99.7	0.0	99.8	0.0	99.9	0.0
CENTRAL	17.8	100.0	2.8	99.8	0.3	98.8	0.2	93.3	0.1	84.8

	San Joaquin River d/s of Dutch Slough Jan 1981 Release - Cumulative particles (%)									
	7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 3A	Base	Option 3A	Base	Option 3A	Base	Option 3A	Base	Option 3A
DIVERSION_AG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAST_CHIPPS	35.1	64.3	51.5	85.0	54.9	87.6	57.4	88.4	58.4	88.4
TO_SUISUN	4.6	8.6	6.6	10.6	7.1	11.0	7.3	11.1	7.6	11.1
EXPORTS*	1.7	0.0	8.5	0.0	16.7	0.0	23.2	0.0	28.8	0.0
CENTRAL	58.6	27.1	33.4	4.4	21.3	1.4	12.1	0.5	5.2	0.5

	Sacramento River Jan 1981 Release - Cumulative particles (%)									
	7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 3A	Base	Option 3A	Base	Option 3A	Base	Option 3A	Base	Option 3A
DIVERSION_AG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAST_CHIPPS	46.1	53.7	57.4	83.0	60.4	85.7	62.4	88.2	62.6	89.4
TO_SUISUN	4.8	5.9	6.3	8.3	6.6	9.1	6.9	9.4	6.9	9.4
EXPORTS*	2.4	0.0	10.2	0.0	16.9	0.0	22.2	0.0	27.0	0.0
CENTRAL	46.7	40.4	26.1	8.7	16.1	5.2	8.5	2.4	3.5	1.2

	San Joaquin River u/s of HOR Jan 1981 Release - Cumulative particles (%)									
	7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 3A	Base	Option 3A	Base	Option 3A	Base	Option 3A	Base	Option 3A
DIVERSION_AG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
PAST_CHIPPS	0.0	0.0	0.0	4.2	0.0	13.8	0.0	37.6	0.0	51.4
TO_SUISUN	0.0	0.0	0.0	0.3	0.0	2.0	0.0	4.1	0.0	6.2
EXPORTS*	65.1	0.0	70.4	0.0	86.3	0.0	93.5	0.0	96.1	0.0
CENTRAL	34.9	100.0	29.6	95.5	13.7	84.2	6.5	58.3	3.9	42.1

* In Baseline, Exports is the sum of particles entering SWP and CVP. In the Option 3, it is the sum of particles leaving through IF diversion and Victoria Canal Siphon

1 Table F-4. Option 3A Cumulative Particle Fate - March 1990

		Old River Mar 1990 Release - Cumulative particles (%)									
		7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 3A	Base	Option 3A	Base	Option 3A	Base	Option 3A	Base	Option 3A	
DIVERSION_AG	0.4	0.2	0.6	0.5	1.8	0.6	2.2	0.9	3.3	1.5	
PAST_CHIPPS	0.0	0.5	0.1	2.1	0.9	10.8	0.8	13.8	1.6	33.8	
TO_SUISUN	0.0	0.1	0.0	0.8	0.2	2.4	0.5	5.1	0.8	10.5	
EXPORTS*	52.9	0.0	71.9	0.0	79.9	0.0	84.0	0.0	85.3	0.0	
CENTRAL	46.7	99.2	27.4	96.6	17.2	86.2	12.5	80.2	9.0	54.2	

		Middle River Mar 1990 Release - Cumulative particles (%)									
		7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 3A	Base	Option 3A	Base	Option 3A	Base	Option 3A	Base	Option 3A	
DIVERSION_AG	0.2	0.0	0.6	0.0	1.2	0.2	2.0	0.4	2.6	3.8	
PAST_CHIPPS	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.1	1.6	
TO_SUISUN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	
EXPORTS*	24.6	0.0	61.0	0.0	77.6	0.0	85.0	0.0	87.4	0.0	
CENTRAL	75.2	100.0	38.4	100.0	21.2	99.6	13.0	99.4	9.9	94.1	

		San Joaquin River d/s of Dutch Slough Mar 1990 Release - Cumulative particles (%)									
		7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 3A	Base	Option 3A	Base	Option 3A	Base	Option 3A	Base	Option 3A	
DIVERSION_AG	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.5	0.2	
PAST_CHIPPS	31.6	38.3	35.3	39.4	51.8	58.9	47.2	52.2	56.5	64.5	
TO_SUISUN	6.3	7.0	9.8	12.5	12.2	15.4	13.7	18.1	15.8	21.0	
EXPORTS*	0.0	0.0	0.4	0.0	1.1	0.0	2.6	0.0	3.7	0.0	
CENTRAL	62.1	54.7	54.5	48.1	34.9	25.7	36.3	29.7	23.5	14.3	

		Sacramento River Mar 1990 Release - Cumulative particles (%)									
		7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 3A	Base	Option 3A	Base	Option 3A	Base	Option 3A	Base	Option 3A	
DIVERSION_AG	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.5	0.6	
PAST_CHIPPS	20.6	4.8	26.0	9.9	39.3	31.6	36.7	29.8	47.7	51.1	
TO_SUISUN	4.2	1.5	7.4	4.4	10.0	8.9	11.5	13.1	14.1	17.2	
EXPORTS*	0.0	0.0	1.2	0.0	3.7	0.0	6.9	0.0	7.6	0.0	
CENTRAL	75.2	93.7	65.4	85.6	46.9	59.4	44.8	57.0	30.1	31.1	

		San Joaquin River u/s of HOR Mar 1990 Release - Cumulative particles (%)									
		7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 3A	Base	Option 3A	Base	Option 3A	Base	Option 3A	Base	Option 3A	
DIVERSION_AG	14.3	6.3	19.4	12.6	20.1	13.6	20.1	14.7	22.1	17.9	
PAST_CHIPPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	4.8	
TO_SUISUN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	
EXPORTS*	51.1	0.0	54.6	0.0	54.9	0.0	54.9	0.0	55.2	0.0	
CENTRAL	34.6	93.7	26.0	87.4	25.0	86.4	25.0	85.2	22.7	75.9	

* In Baseline, Exports is the sum of particles entering SWP and CVP. In the Option 3, it is the sum of particles leaving through IF diversion and Victoria Canal Siphon

1 Table F-5. Option 3B Cumulative Particle Fate - September 1977

		Old River Sep 1977 Release - Cumulative particles (%)									
		7 Days		14 Days		21 Days		28 Days		40 Days	
		Base	Option 3B	Base	Option 3B	Base	Option 3B	Base	Option 3B	Base	Option 3B
DIVERSION_AG		1.7	0.4	4.0	0.6	5.0	1.2	5.6	1.6	6.7	1.7
PAST_CHIPPS		0.0	0.0	0.0	0.1	0.1	2.1	0.3	2.8	1.7	12.2
TO_SUISUN		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EXPORTS*		53.1	0.0	67.5	0.0	75.3	0.0	79.9	0.0	84.3	2.2
CENTRAL		45.2	99.6	28.5	99.3	19.6	96.7	14.2	95.6	7.3	83.9

		Middle River Sep 1977 Release - Cumulative particles (%)									
		7 Days		14 Days		21 Days		28 Days		40 Days	
		Base	Option 3B	Base	Option 3B	Base	Option 3B	Base	Option 3B	Base	Option 3B
DIVERSION_AG		0.4	0.3	1.2	0.5	1.7	0.9	2.8	1.2	3.4	1.5
PAST_CHIPPS		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TO_SUISUN		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EXPORTS*		32.3	0.0	63.5	3.9	80.8	45.3	88.5	56.2	93.3	80.1
CENTRAL		67.3	99.7	35.3	95.6	17.5	53.8	8.7	42.6	3.3	18.4

		San Joaquin River d/s of Dutch Slough Sep 1977 Release - Cumulative particles (%)									
		7 Days		14 Days		21 Days		28 Days		40 Days	
		Base	Option 3B	Base	Option 3B	Base	Option 3B	Base	Option 3B	Base	Option 3B
DIVERSION_AG		0.0	0.0	0.1	0.0	0.1	0.0	0.3	0.0	0.7	0.1
PAST_CHIPPS		17.0	17.4	17.9	18.5	37.4	38.6	34.8	37.1	48.9	54.9
TO_SUISUN		0.1	0.3	0.0	0.0	0.3	0.1	0.0	0.2	0.2	0.2
EXPORTS*		0.0	0.0	0.5	0.0	2.1	0.0	4.5	0.0	11.0	1.5
CENTRAL		82.9	82.3	81.5	81.5	60.1	61.3	60.4	62.7	39.2	43.3

		Sacramento River Sep 1977 Release - Cumulative particles (%)									
		7 Days		14 Days		21 Days		28 Days		40 Days	
		Base	Option 3B	Base	Option 3B	Base	Option 3B	Base	Option 3B	Base	Option 3B
DIVERSION_AG		0.1	0.0	0.2	0.0	0.3	0.1	0.7	0.5	1.2	0.7
PAST_CHIPPS		0.3	0.7	1.1	1.3	9.0	11.7	10.0	12.8	20.6	27.7
TO_SUISUN		0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.0	0.3	0.2
EXPORTS*		0.0	0.0	0.9	0.0	4.6	0.0	9.6	0.0	20.2	2.1
CENTRAL		99.6	99.3	97.8	98.7	85.8	88.1	79.7	86.7	57.7	69.3

		San Joaquin River u/s of HOR Sep 1977 Release - Cumulative particles (%)									
		7 Days		14 Days		21 Days		28 Days		40 Days	
		Base	Option 3B	Base	Option 3B	Base	Option 3B	Base	Option 3B	Base	Option 3B
DIVERSION_AG		7.1	1.9	7.9	5.1	9.8	7.6	11.2	9.9	13.6	15.0
PAST_CHIPPS		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
TO_SUISUN		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EXPORTS*		30.3	0.0	32.4	0.0	33.5	0.0	46.5	0.0	67.1	15.2
CENTRAL		62.6	98.1	59.7	94.9	56.7	92.4	42.3	90.1	19.3	69.6

* In Baseline, Exports is the sum of particles entering SWP and CVP. In the Option 3, it is the sum of particles leaving through IF diversion and Victoria Canal Siphon

1 Table F-6. Option 3B Cumulative Particle Fate - January 1981

		Old River Jan 1981 Release - Cumulative particles (%)									
		7 Days		14 Days		21 Days		28 Days		40 Days	
		Base	Option 3B	Base	Option 3B	Base	Option 3B	Base	Option 3B	Base	Option 3B
DIVERSION_AG		0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.0
PAST_CHIPPS		0.2	1.1	0.2	17.0	0.2	30.2	0.3	57.9	0.3	72.6
TO_SUISUN		0.0	0.1	0.0	1.2	0.0	4.2	0.0	6.4	0.0	10.0
EXPORTS*		90.4	0.0	95.1	0.0	97.6	0.0	98.0	0.0	98.7	0.0
CENTRAL		9.4	98.8	4.7	81.8	2.2	65.6	1.5	35.7	0.8	17.4

		Middle River Jan 1981 Release - Cumulative particles (%)									
		7 Days		14 Days		21 Days		28 Days		40 Days	
		Base	Option 3B	Base	Option 3B	Base	Option 3B	Base	Option 3B	Base	Option 3B
DIVERSION_AG		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAST_CHIPPS		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	2.2
TO_SUISUN		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2
EXPORTS*		82.2	0.0	97.2	0.0	99.7	5.1	99.8	12.1	99.9	39.2
CENTRAL		17.8	100.0	2.8	100.0	0.3	94.9	0.2	86.9	0.1	58.4

		San Joaquin River d/s of Dutch Slough Jan 1981 Release - Cumulative particles (%)									
		7 Days		14 Days		21 Days		28 Days		40 Days	
		Base	Option 3B	Base	Option 3B	Base	Option 3B	Base	Option 3B	Base	Option 3B
DIVERSION_AG		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAST_CHIPPS		35.1	48.5	51.5	76.4	54.9	78.7	57.4	84.5	58.4	85.4
TO_SUISUN		4.6	7.0	6.6	10.9	7.1	12.4	7.3	13.0	7.6	13.3
EXPORTS*		1.7	0.0	8.5	0.0	16.7	0.0	23.2	0.0	28.8	0.0
CENTRAL		58.6	44.5	33.4	12.7	21.3	8.9	12.1	2.5	5.2	1.3

		Sacramento River Jan 1981 Release - Cumulative particles (%)									
		7 Days		14 Days		21 Days		28 Days		40 Days	
		Base	Option 3B	Base	Option 3B	Base	Option 3B	Base	Option 3B	Base	Option 3B
DIVERSION_AG		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAST_CHIPPS		46.1	19.4	57.4	60.0	60.4	67.0	62.4	79.7	62.6	82.3
TO_SUISUN		4.8	4.5	6.3	9.9	6.6	12.2	6.9	13.0	6.9	14.0
EXPORTS*		2.4	0.0	10.2	0.0	16.9	0.0	22.2	0.0	27.0	0.0
CENTRAL		46.7	76.1	26.1	30.1	16.1	20.8	8.5	7.3	3.5	3.7

		San Joaquin River u/s of HOR Jan 1981 Release - Cumulative particles (%)									
		7 Days		14 Days		21 Days		28 Days		40 Days	
		Base	Option 3B	Base	Option 3B	Base	Option 3B	Base	Option 3B	Base	Option 3B
DIVERSION_AG		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
PAST_CHIPPS		0.0	0.0	0.0	1.4	0.0	7.4	0.0	29.4	0.0	50.5
TO_SUISUN		0.0	0.0	0.0	0.3	0.0	1.6	0.0	3.2	0.0	6.5
EXPORTS*		65.1	0.0	70.4	0.0	86.3	0.0	93.5	0.0	96.1	0.1
CENTRAL		34.9	100.0	29.6	98.3	13.7	91.0	6.5	67.4	3.9	42.6

* In Baseline, Exports is the sum of particles entering SWP and CVP. In the Option 3, it is the sum of particles leaving through IF diversion and Victoria Canal Siphon

1 Table F-7. Option 3B Cumulative Particle Fate - March 1990

		Old River Mar 1990 Release - Cumulative particles (%)									
		7 Days		14 Days		21 Days		28 Days		40 Days	
		Base	Option 3B	Base	Option 3B	Base	Option 3B	Base	Option 3B	Base	Option 3B
DIVERSION_AG		0.4	0.1	0.6	0.3	1.8	0.5	2.2	1.3	3.3	3.6
PAST_CHIPPS		0.0	0.2	0.1	0.5	0.9	3.5	0.8	3.4	1.6	7.9
TO_SUISUN		0.0	0.0	0.0	0.2	0.2	0.5	0.5	1.5	0.8	4.3
EXPORTS*		52.9	0.0	71.9	0.0	79.9	0.0	84.0	0.0	85.3	0.5
CENTRAL		46.7	99.7	27.4	99.0	17.2	95.5	12.5	93.8	9.0	83.7

		Middle River Mar 1990 Release - Cumulative particles (%)									
		7 Days		14 Days		21 Days		28 Days		40 Days	
		Base	Option 3B	Base	Option 3B	Base	Option 3B	Base	Option 3B	Base	Option 3B
DIVERSION_AG		0.2	0.3	0.6	2.6	1.2	3.3	2.0	3.8	2.6	4.4
PAST_CHIPPS		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
TO_SUISUN		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EXPORTS*		24.6	0.0	61.0	7.8	77.6	56.5	85.0	65.2	87.4	82.7
CENTRAL		75.2	99.7	38.4	89.6	21.2	40.2	13.0	31.0	9.9	12.9

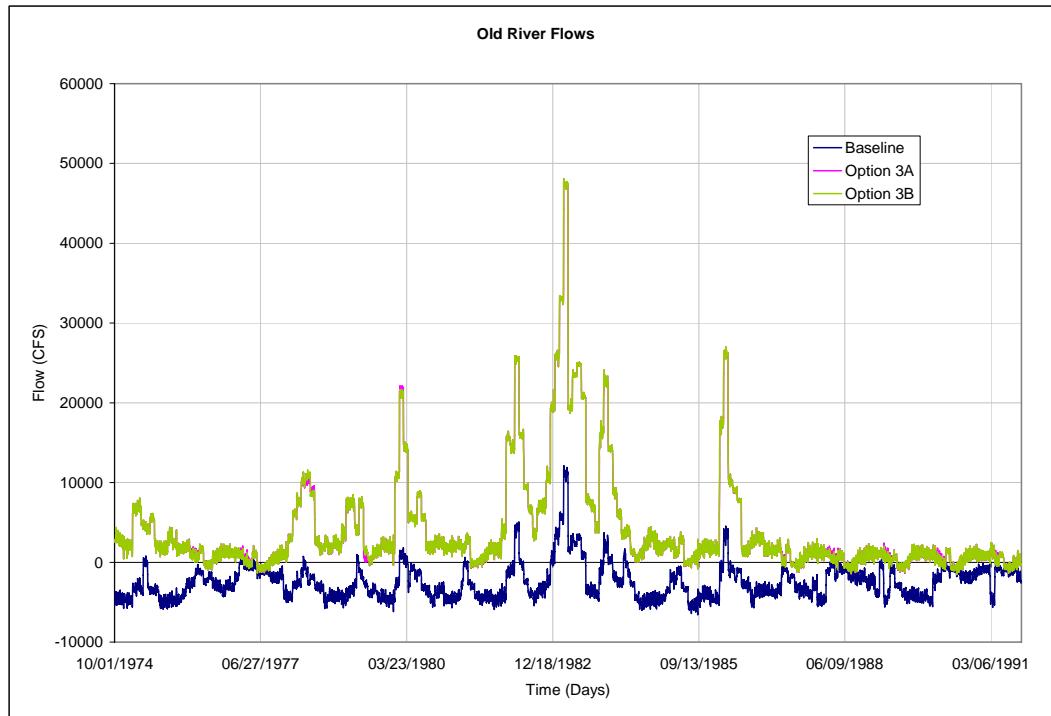
		San Joaquin River d/s of Dutch Slough Mar 1990 Release - Cumulative particles (%)									
		7 Days		14 Days		21 Days		28 Days		40 Days	
		Base	Option 3B	Base	Option 3B	Base	Option 3B	Base	Option 3B	Base	Option 3B
DIVERSION_AG		0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.5	0.2
PAST_CHIPPS		31.6	29.0	35.3	26.1	51.8	38.8	47.2	30.9	56.5	37.7
TO_SUISUN		6.3	5.9	9.8	9.8	12.2	14.0	13.7	17.3	15.8	22.8
EXPORTS*		0.0	0.0	0.4	0.0	1.1	0.0	2.6	0.0	3.7	0.2
CENTRAL		62.1	65.1	54.5	64.1	34.9	47.2	36.3	51.8	23.5	39.1

		Sacramento River Mar 1990 Release - Cumulative particles (%)									
		7 Days		14 Days		21 Days		28 Days		40 Days	
		Base	Option 3B	Base	Option 3B	Base	Option 3B	Base	Option 3B	Base	Option 3B
DIVERSION_AG		0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.3	0.5	0.7
PAST_CHIPPS		20.6	2.3	26.0	4.6	39.3	17.3	36.7	15.1	47.7	22.0
TO_SUISUN		4.2	0.4	7.4	1.8	10.0	4.6	11.5	7.0	14.1	11.7
EXPORTS*		0.0	0.0	1.2	0.0	3.7	0.0	6.9	0.0	7.6	0.6
CENTRAL		75.2	97.3	65.4	93.5	46.9	78.0	44.8	77.6	30.1	65.0

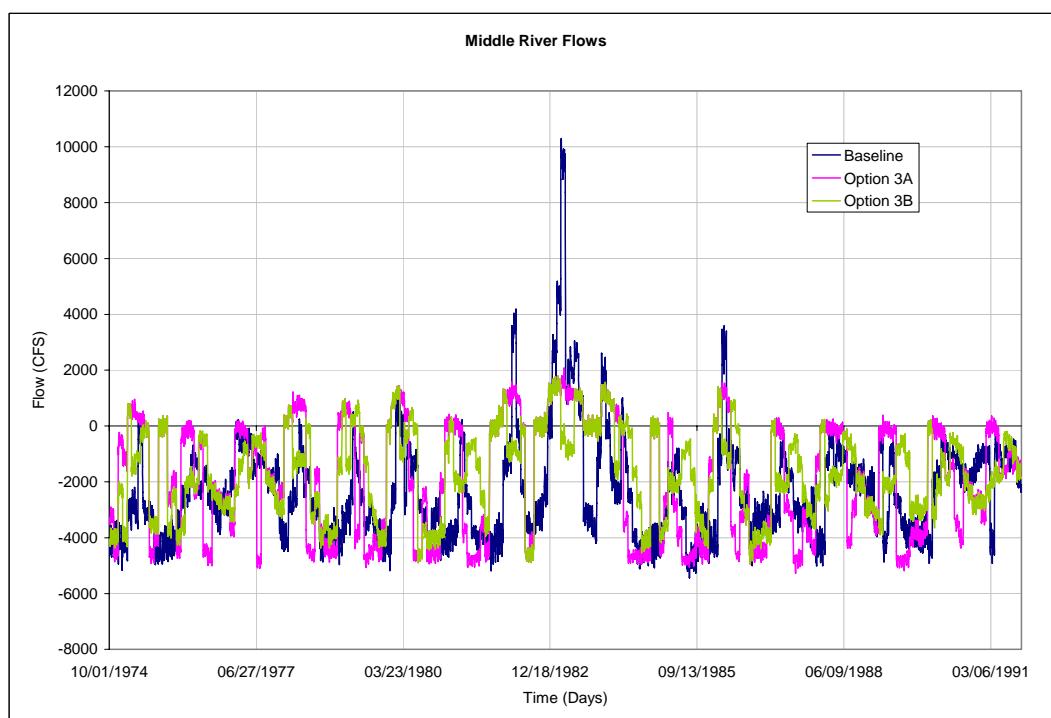
		San Joaquin River u/s of HOR Mar 1990 Release - Cumulative particles (%)									
		7 Days		14 Days		21 Days		28 Days		40 Days	
		Base	Option 3B	Base	Option 3B	Base	Option 3B	Base	Option 3B	Base	Option 3B
DIVERSION_AG		14.3	8.1	19.4	18.2	20.1	21.0	20.1	23.0	22.1	28.9
PAST_CHIPPS		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TO_SUISUN		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EXPORTS*		51.1	0.0	54.6	0.0	54.9	0.0	54.9	0.0	55.2	8.4
CENTRAL		34.6	91.9	26.0	81.8	25.0	79.0	25.0	77.0	22.7	62.7

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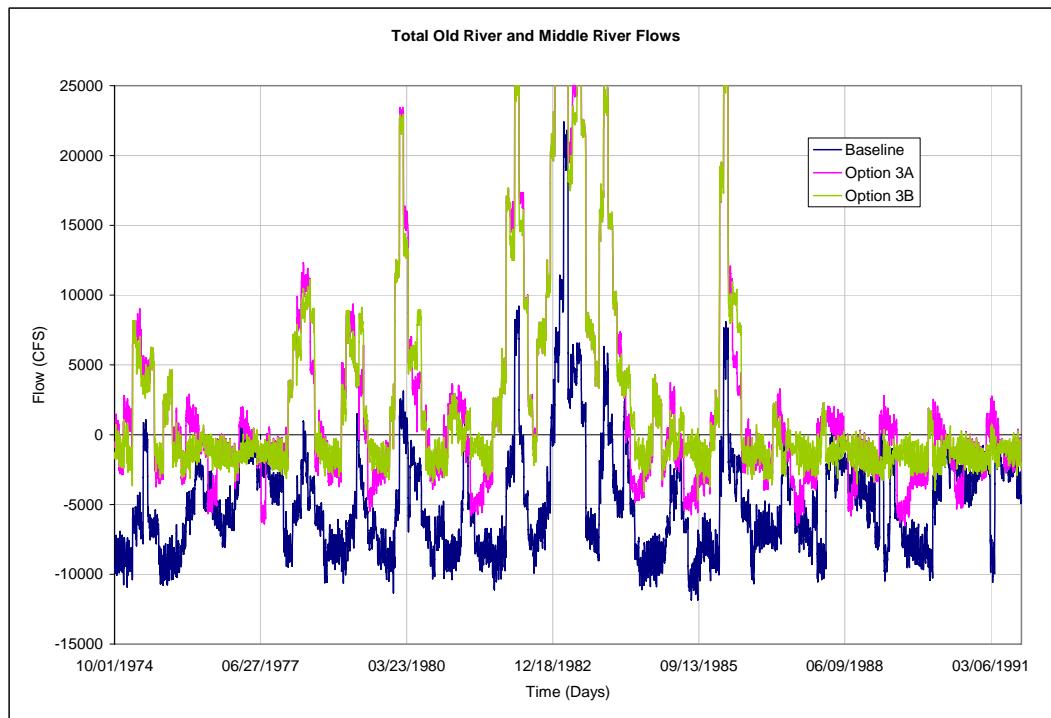
* In Baseline, Exports is the sum of particles entering SWP and CVP. In the Option 3, it is the sum of particles leaving through IF diversion and Victoria Canal Siphon



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2 **Figure F-16. DSM2 Simulated Daily Averaged Old River Flows**
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5 **Figure F-17. DSM2 Simulated Daily Averaged Middle River Flows**
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2 **Figure F-18. DSM2 Simulated Daily Averaged Combined Old and Middle River Flows**
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